OIPE
APR 28 2005
PATENT & TRADEMARK OFFICE
JC109
CANCELLED
APR 28 2005
PATENT & TRADEMARK OFFICE
JC109

FIG. 1

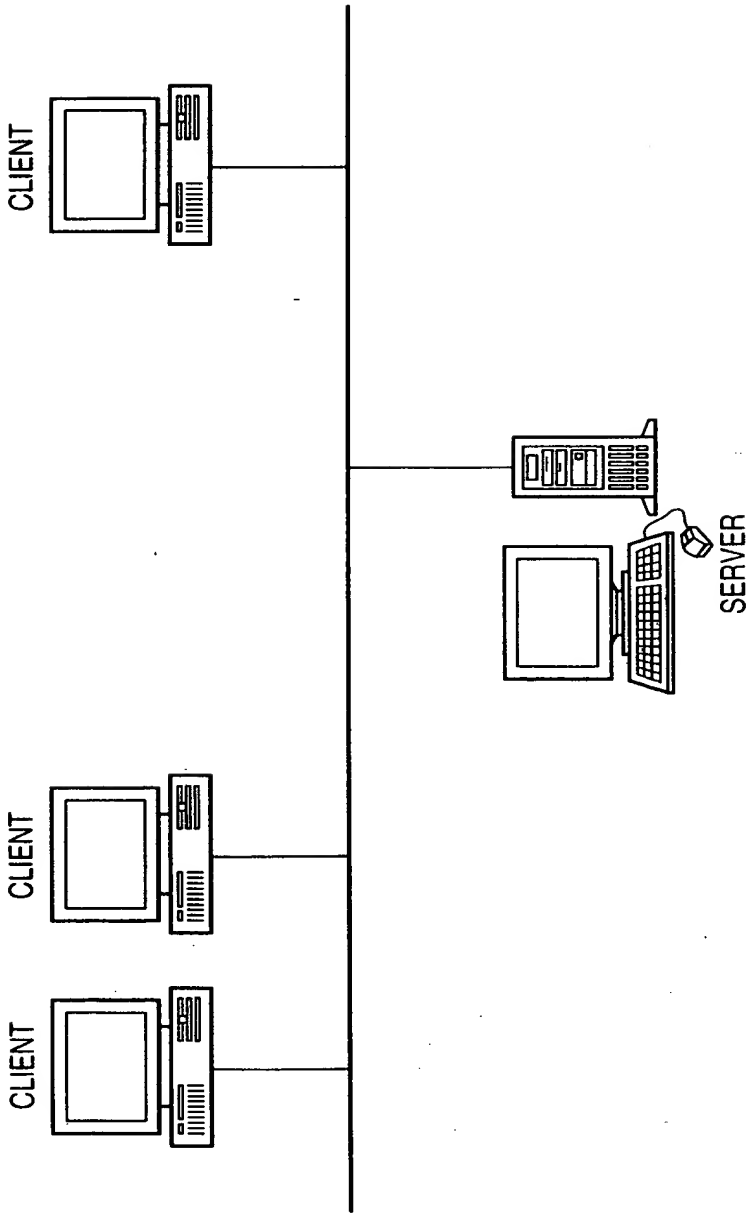


FIG. 2

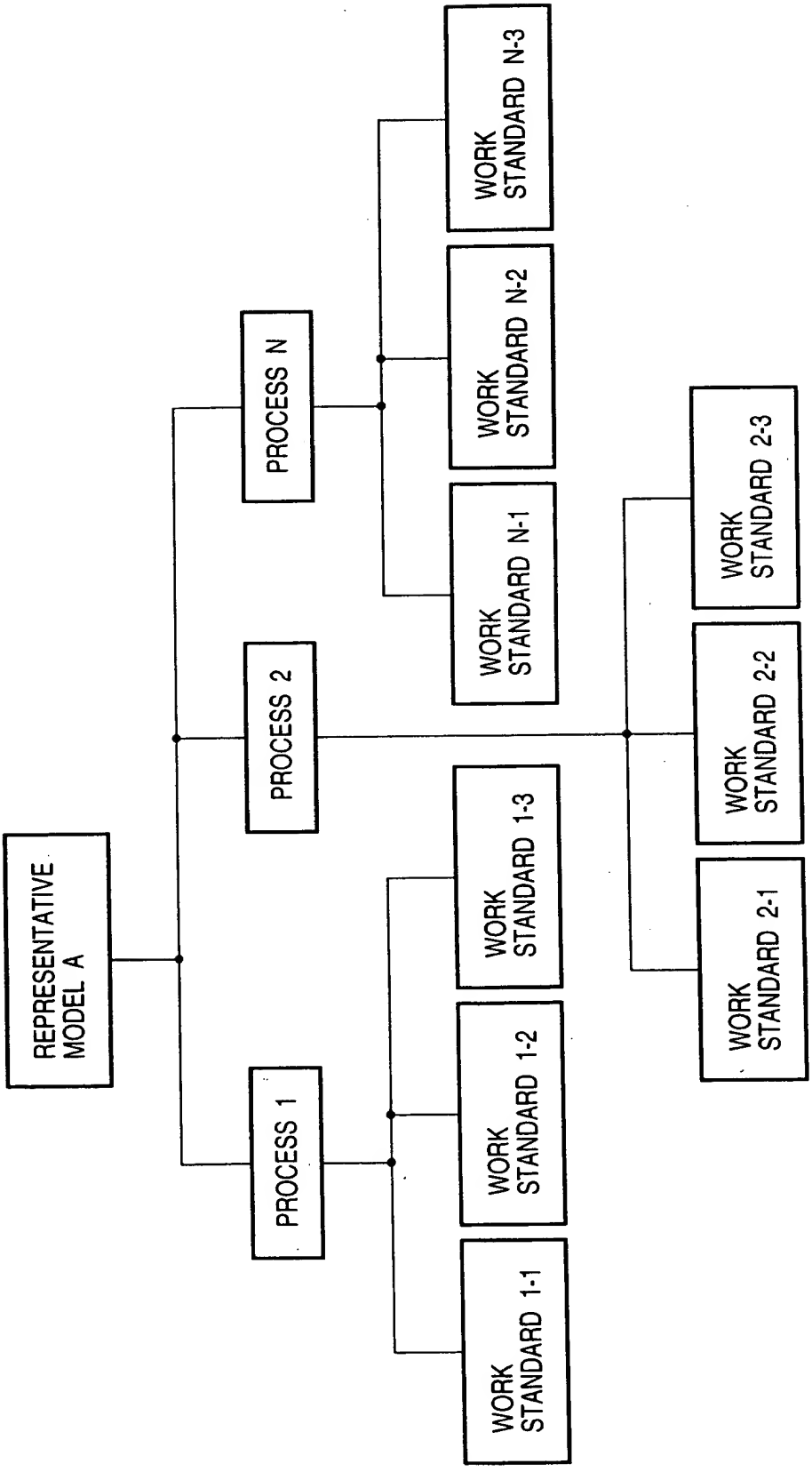

REPRESENTATIVE MODEL A
PROCESS 1
PROCESS 2
PROCESS N
WORK STANDARD 1-1
WORK STANDARD 1-2
WORK STANDARD 1-3
WORK STANDARD 2-1
WORK STANDARD 2-2
WORK STANDARD 2-3
WORK STANDARD N-1
WORK STANDARD N-2
WORK STANDARD N-3

FIG. 3

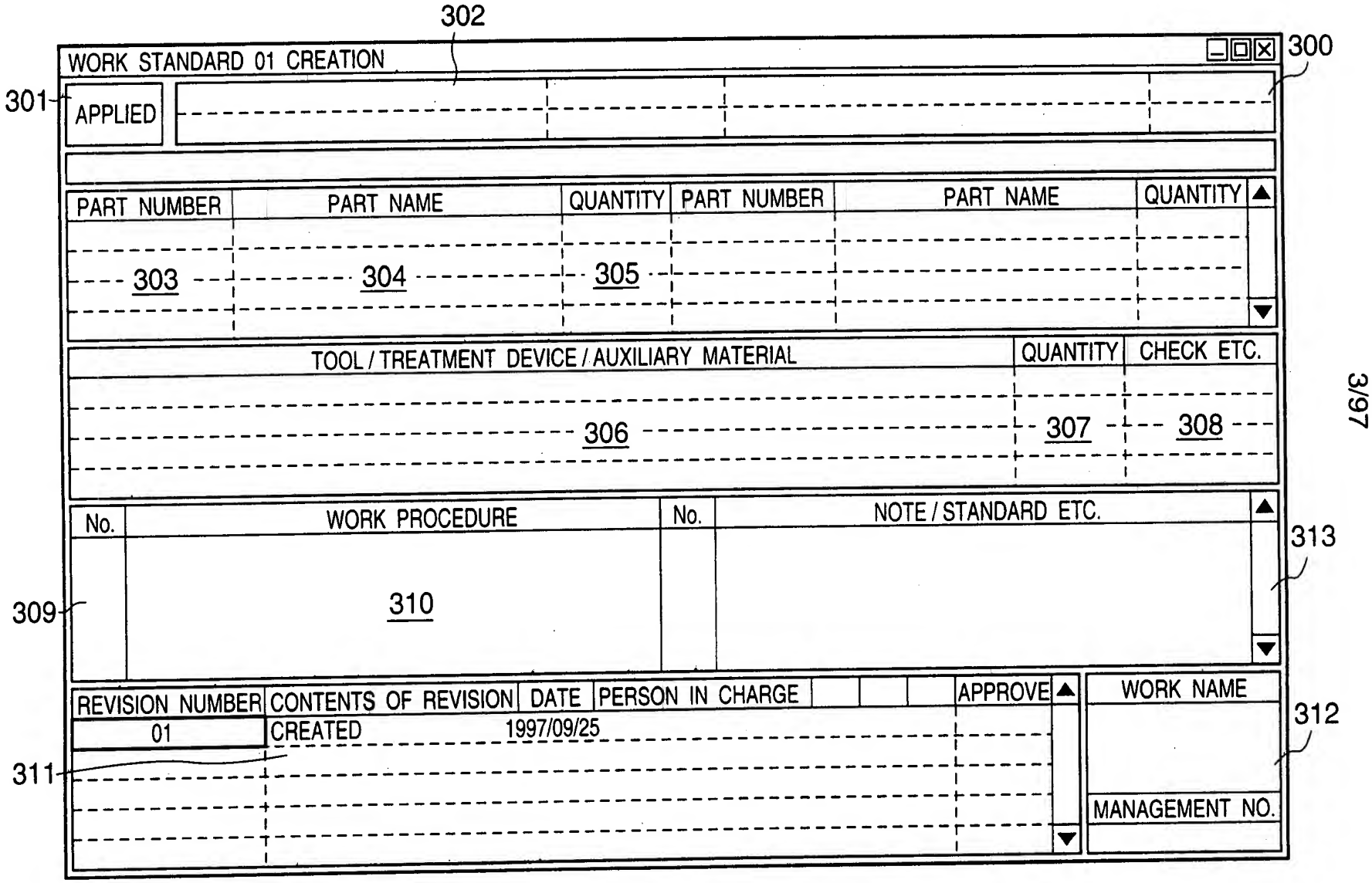

302
300
WORK STANDARD 01 CREATION
301
APPLIED
PART NUMBER
PART NAME
QUANTITY
PART NUMBER
PART NAME
QUANTITY
303
304
305
TOOL / TREATMENT DEVICE / AUXILIARY MATERIAL
QUANTITY
CHECK ETC.
306
307
308
No.
WORK PROCEDURE
No.
NOTE / STANDARD ETC.
313
309
310
REVISION NUMBER
CONTENTS OF REVISION
DATE
PERSON IN CHARGE
APPROVE
01
CREATED
1997/09/25
311
WORK NAME
312
MANAGEMENT NO.

FIG. 4

STRUCTURE OF MASTER FILE

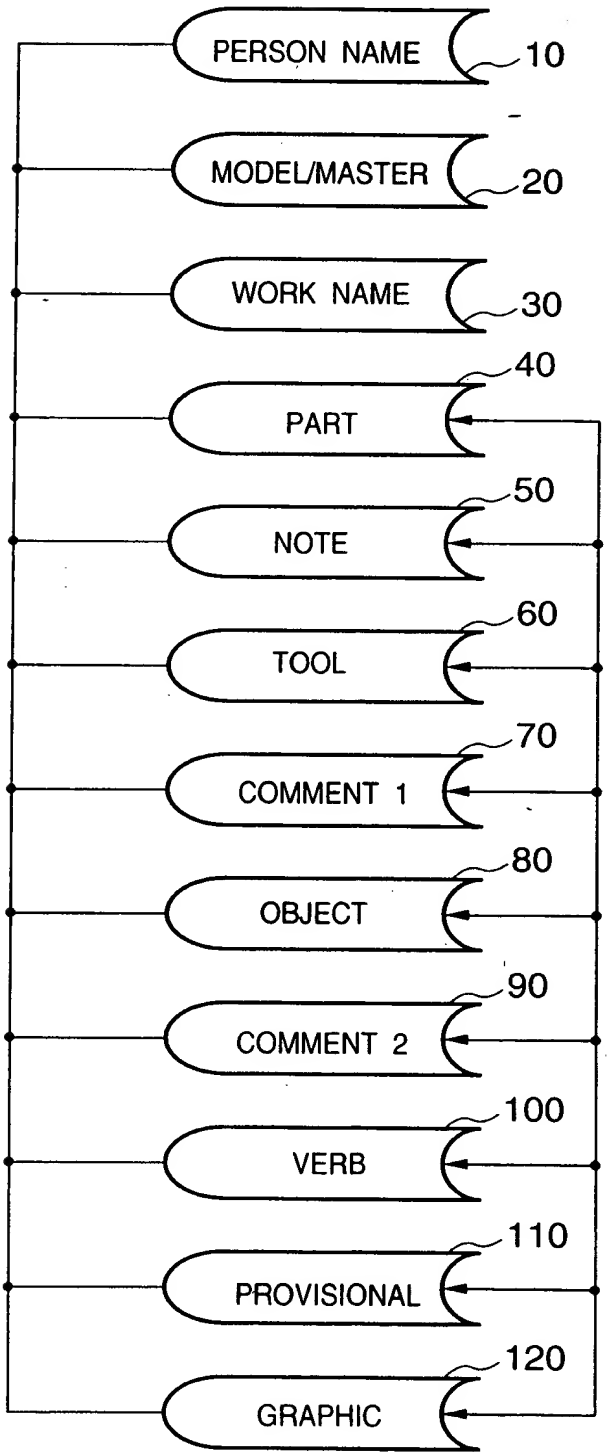


FIG. 5

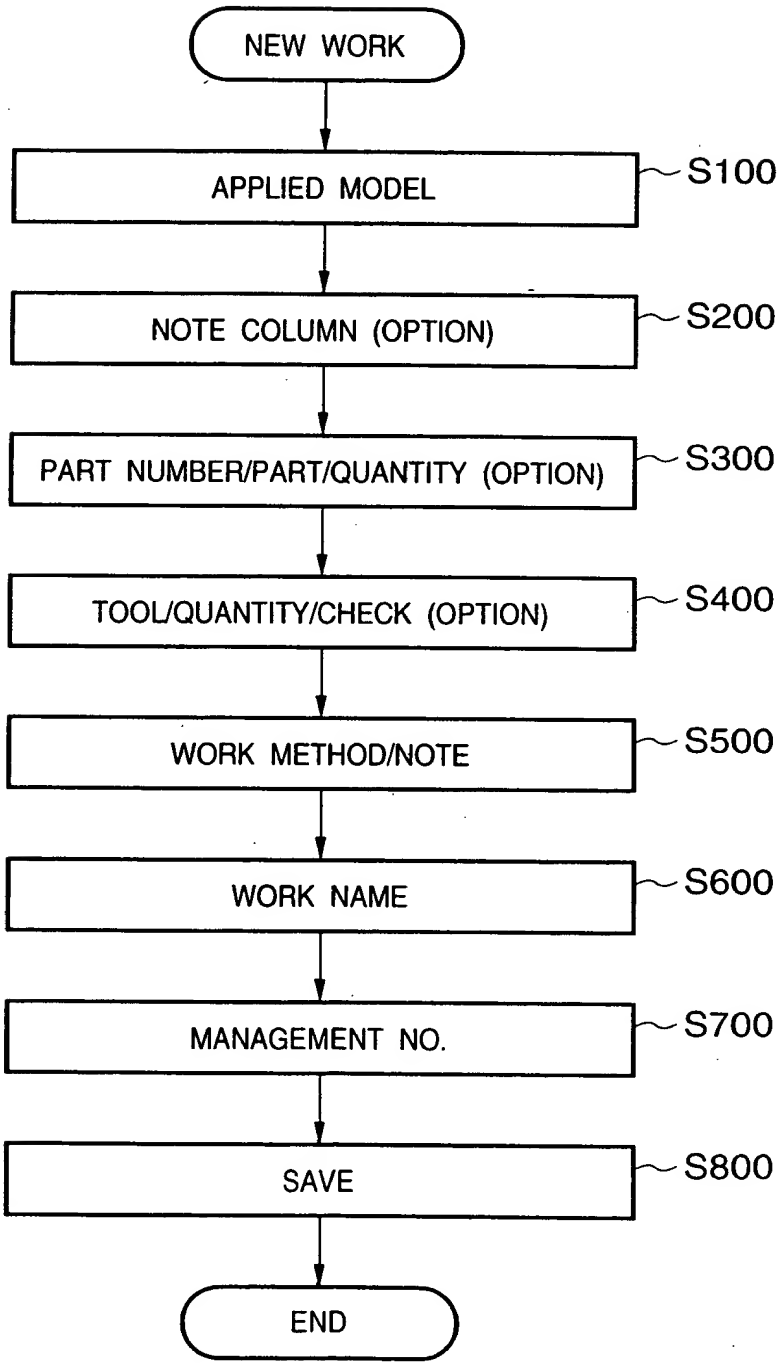

NEW WORK
APPLIED MODEL
S100
NOTE COLUMN (OPTION)
S200
PART NUMBER/PART/QUANTITY (OPTION)
S300
TOOL/QUANTITY/CHECK (OPTION)
S400
WORK METHOD/NOTE
S500
WORK NAME
S600
MANAGEMENT NO.
S700
SAVE
S800
END

FIG. 6

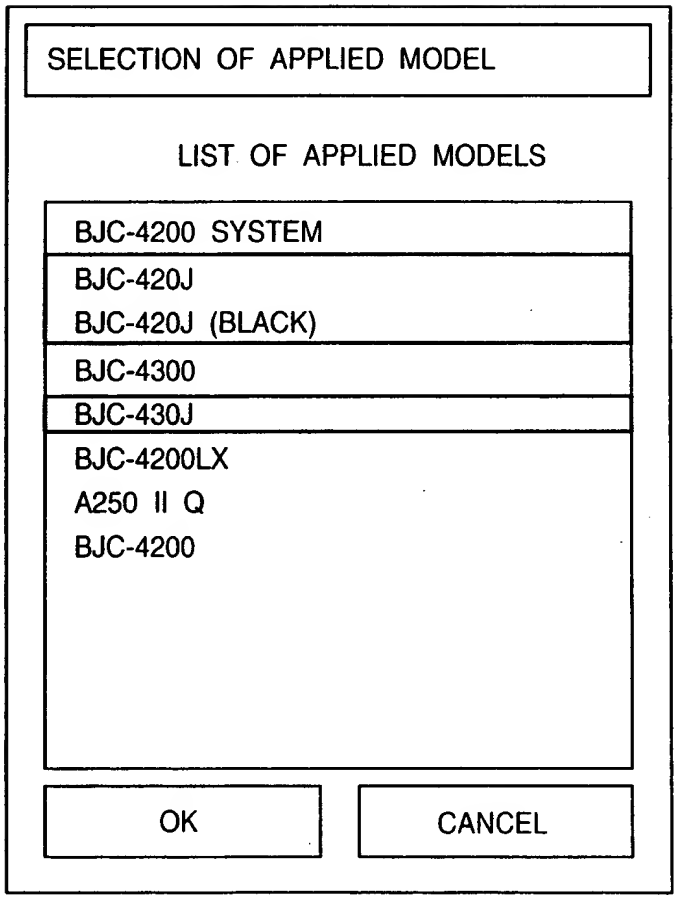

SELECTION OF APPLIED MODEL
LIST OF APPLIED MODELS
BJC-4200 SYSTEM
BJC-420J
BJC-420J (BLACK)
BJC-4300
BJC-430J
BJC-4200LX
A250 II Q
BJC-4200
OK
CANCEL

FIG. 7

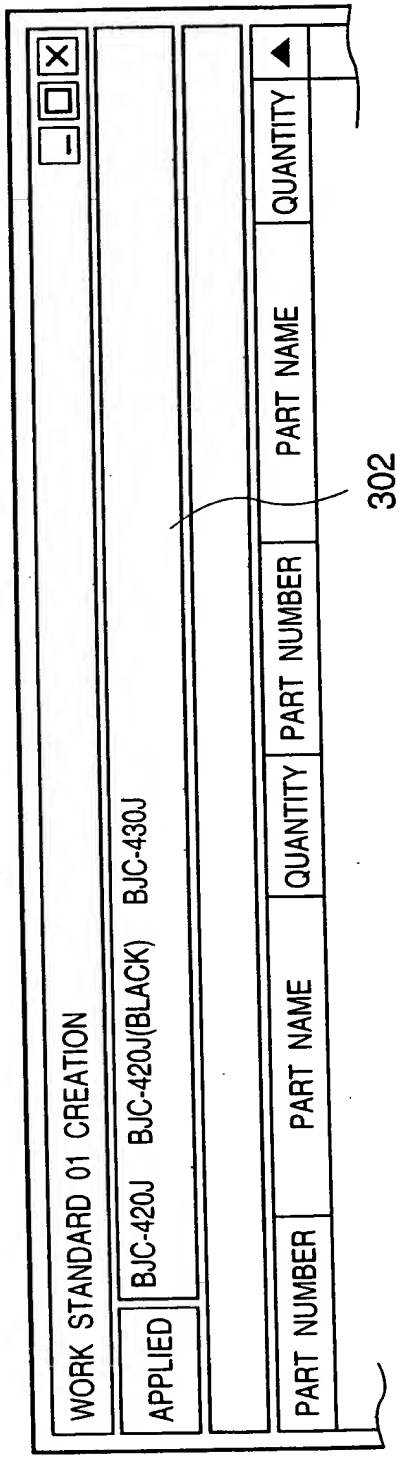
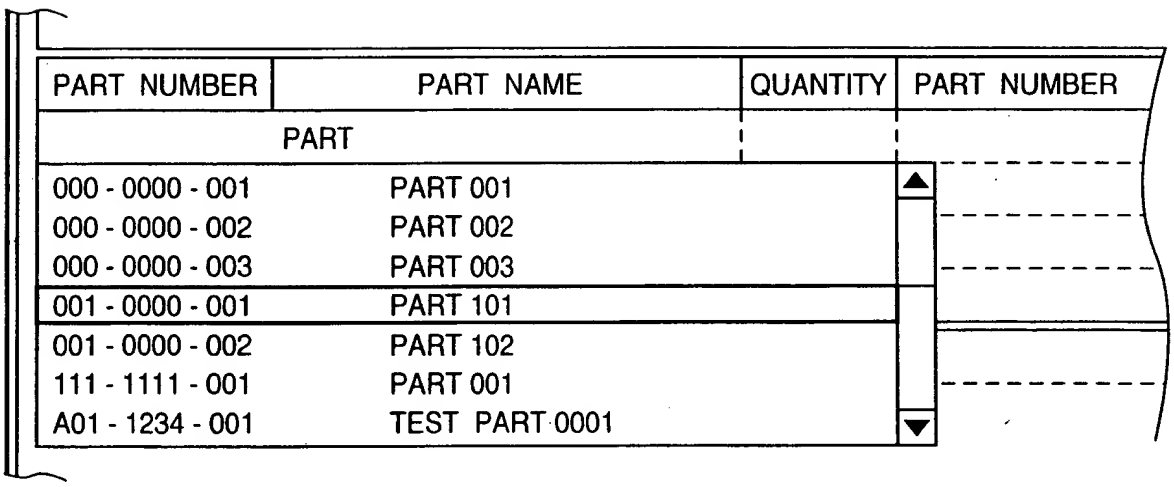

WORK STANDARD 01 CREATION
APPLIED
BJC-420J BJC-420J(BLACK) BJC-430J
PART NUMBER
PART NAME
QUANTITY
PART NUMBER
PART NAME
QUANTITY
302

FIG. 8



PART NUMBER	PART NAME	QUANTITY	PART NUMBER
PART			
000 - 0000 - 001	PART 001		
000 - 0000 - 002	PART 002		
000 - 0000 - 003	PART 003		
001 - 0000 - 001	PART 101		
001 - 0000 - 002	PART 102		
111 - 1111 - 001	PART 001		
A01 - 1234 - 001	TEST PART 0001		

FIG. 9

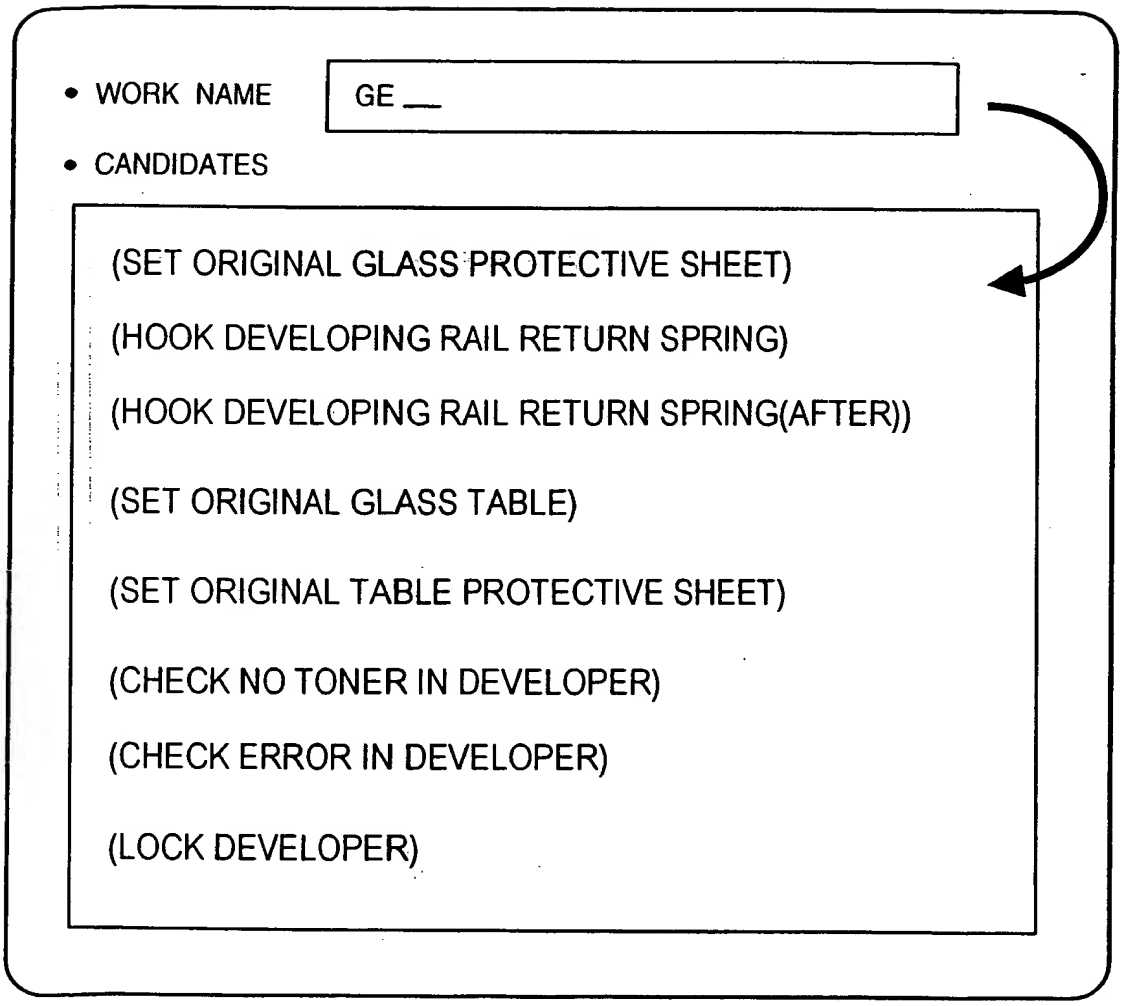

• WORK NAME
GE __
• CANDIDATES
(SET ORIGINAL GLASS PROTECTIVE SHEET)
(HOOK DEVELOPING RAIL RETURN SPRING)
(HOOK DEVELOPING RAIL RETURN SPRING(AFTER))
(SET ORIGINAL GLASS TABLE)
(SET ORIGINAL TABLE PROTECTIVE SHEET)
(CHECK NO TONER IN DEVELOPER)
(CHECK ERROR IN DEVELOPER)
(LOCK DEVELOPER)

FIG. 10

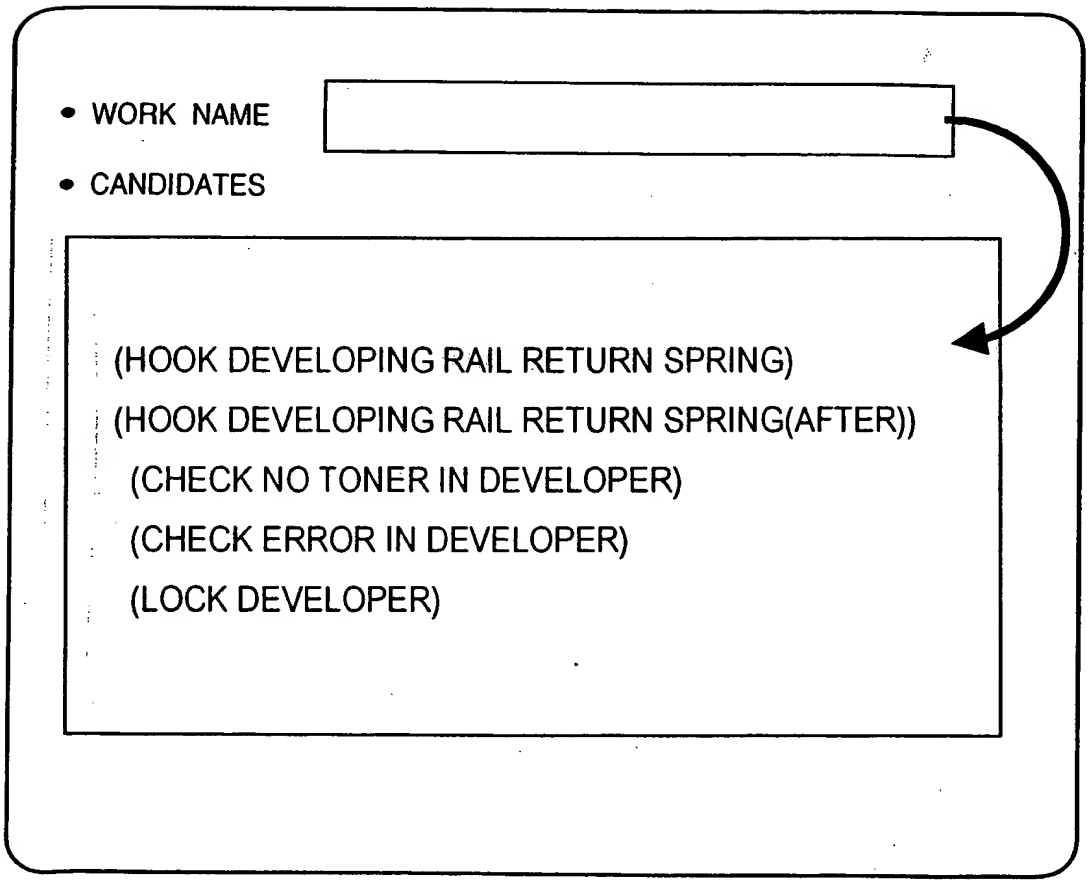

• WORK NAME
• CANDIDATES
(HOOK DEVELOPING RAIL RETURN SPRING)
(HOOK DEVELOPING RAIL RETURN SPRING(AFTER))
(CHECK NO TONER IN DEVELOPER)
(CHECK ERROR IN DEVELOPER)
(LOCK DEVELOPER)

FIG. 11

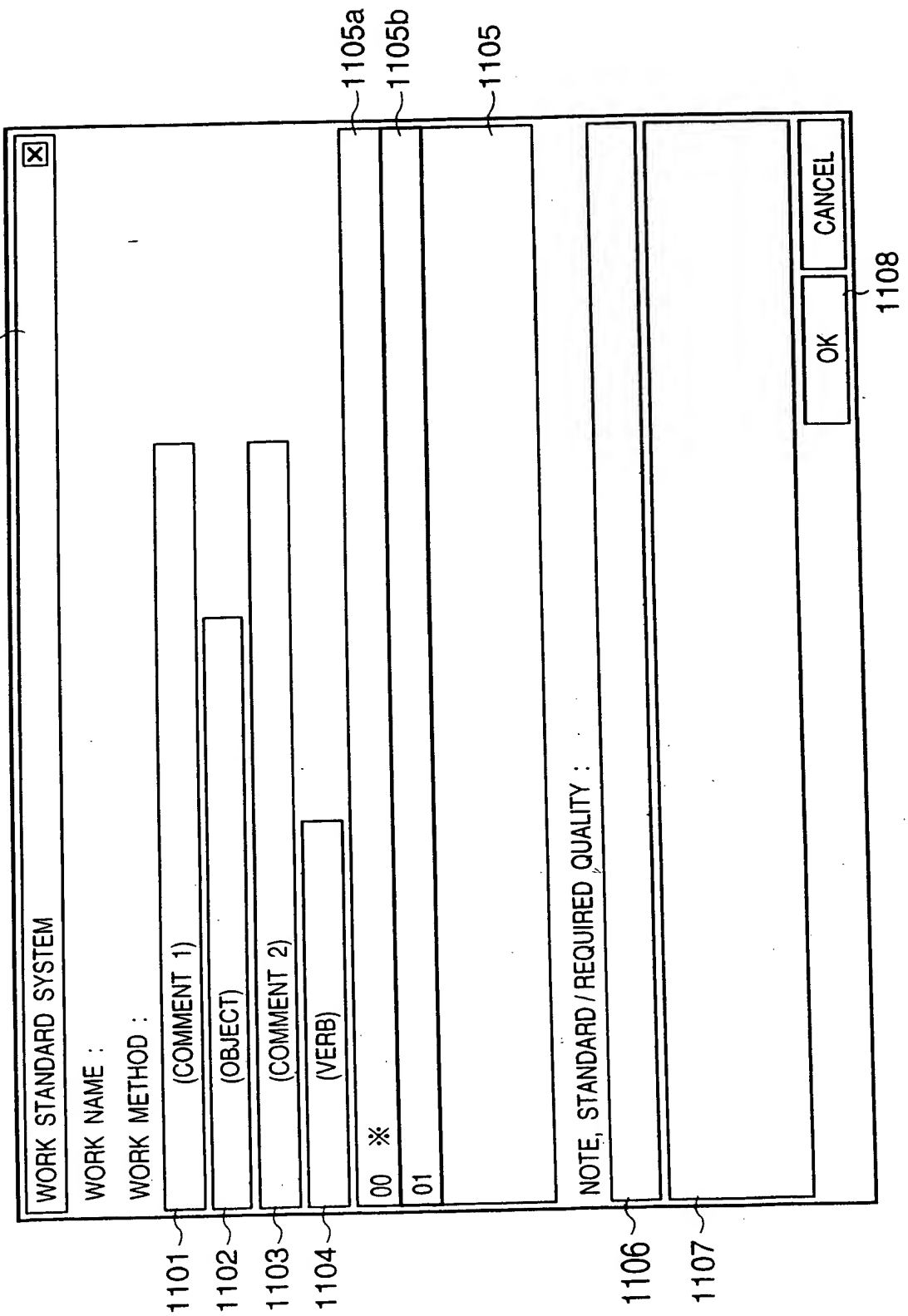

1100
WORK STANDARD SYSTEM
WORK NAME :
WORK METHOD :
(COMMENT 1)
(OBJECT)
(COMMENT 2)
(VERB)
00 ※
01
NOTE, STANDARD / REQUIRED QUALITY :
OK
CANCEL
1101
1102
1103
1104
1105a
1105b
1105
1106
1107
1108

FIG. 12

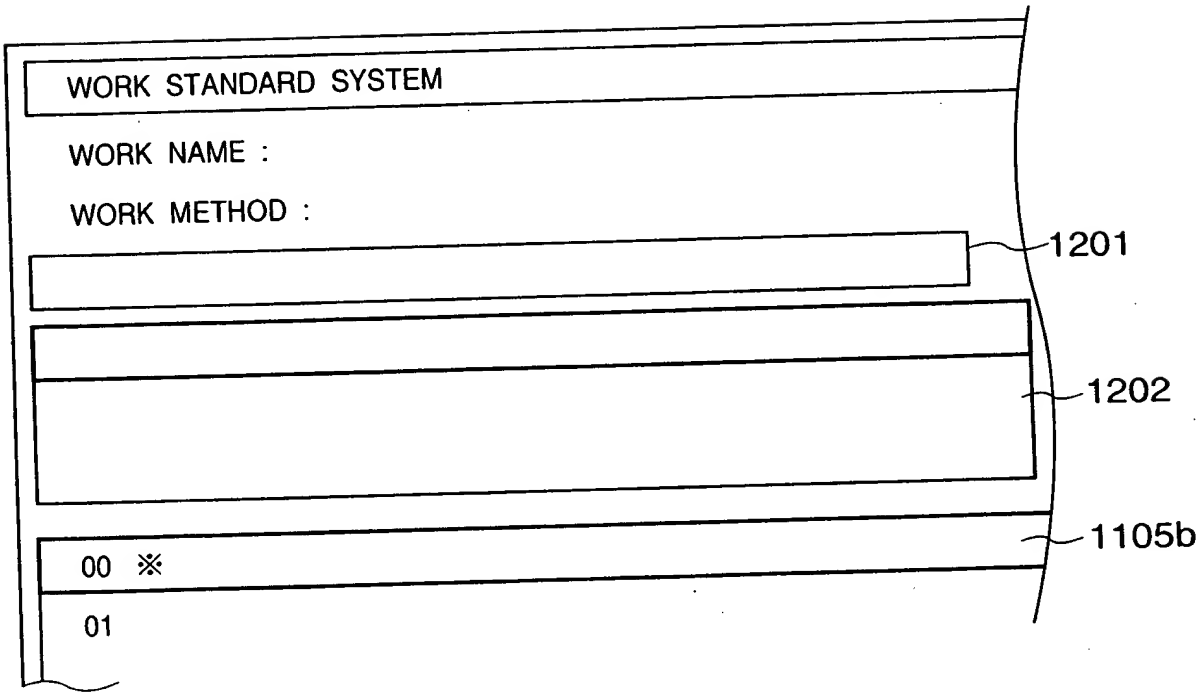

WORK STANDARD SYSTEM
WORK NAME :
WORK METHOD :
1201
1202
1105b
00 ※
01

FIG. 13

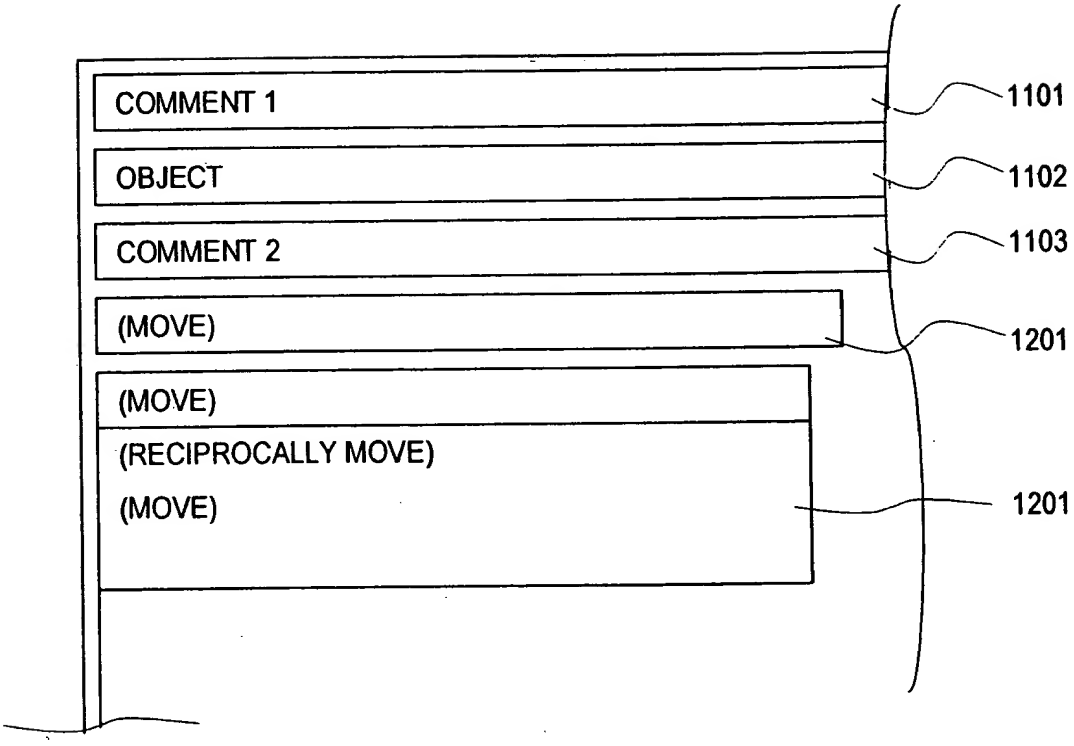

COMMENT 1
1101
OBJECT
1102
COMMENT 2
1103
(MOVE)
1201
(MOVE)
(RECIPROCALLY MOVE)
(MOVE)
1201

FIG. 14

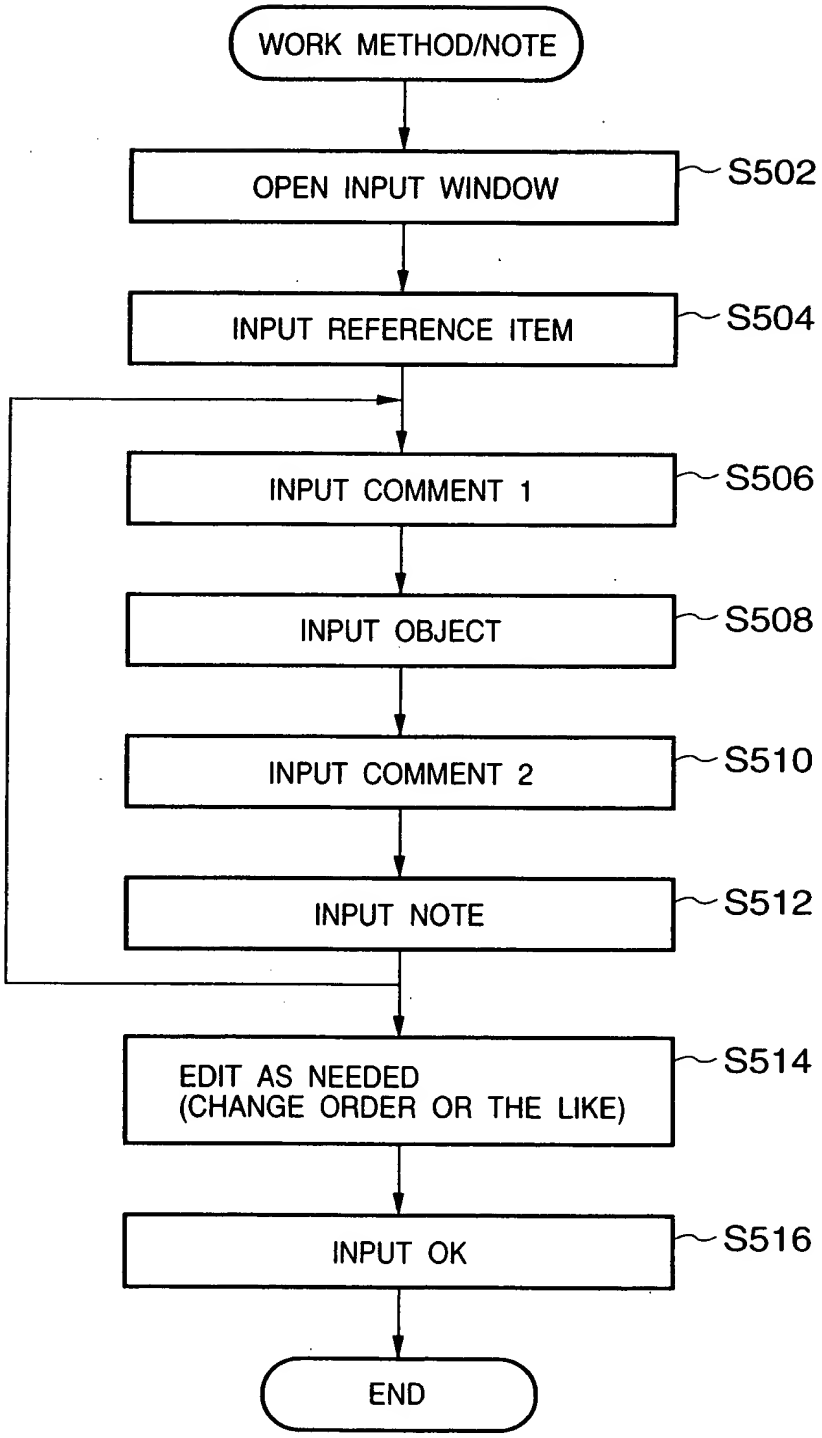

WORK METHOD/NOTE
OPEN INPUT WINDOW
S502
INPUT REFERENCE ITEM
S504
INPUT COMMENT 1
S506
INPUT OBJECT
S508
INPUT COMMENT 2
S510
INPUT NOTE
S512
EDIT AS NEEDED
(CHANGE ORDER OR THE LIKE)
S514
INPUT OK
S516
END

FIG. 15

00	※	
01	DO zzzz SUCH THAT xxxx AT wwww POSITION BECOMES yyyy	
02	WIND AV CORD	
03	CONFIRM 100V SYSTEM	
04	SET CRG HOLDER	

FIG. 16

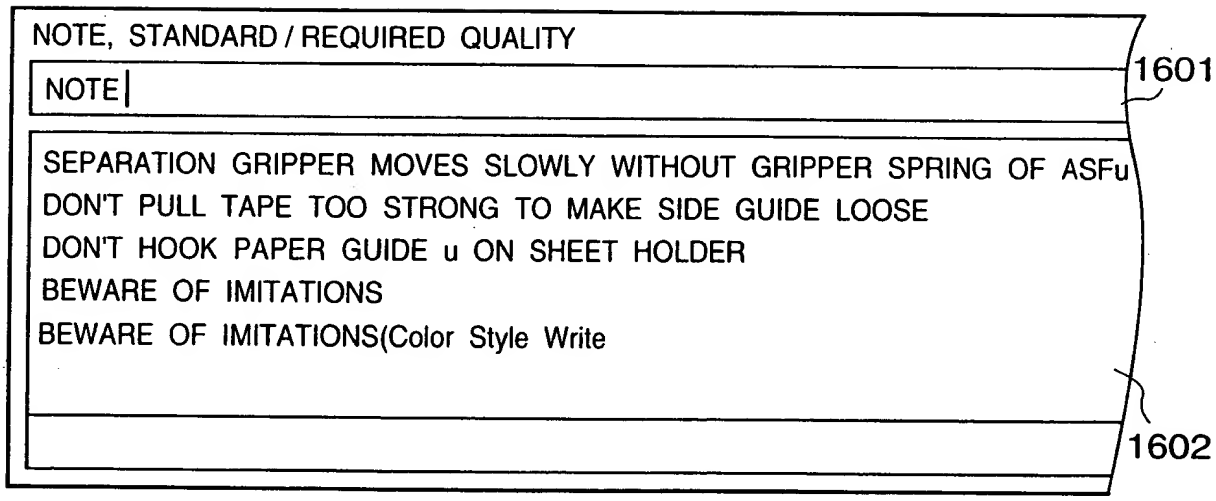

NOTE, STANDARD / REQUIRED QUALITY
NOTE
1601
SEPARATION GRIPPER MOVES SLOWLY WITHOUT GRIPPER SPRING OF ASFu
DON'T PULL TAPE TOO STRONG TO MAKE SIDE GUIDE LOOSE
DON'T HOOK PAPER GUIDE u ON SHEET HOLDER
BEWARE OF IMITATIONS
BEWARE OF IMITATIONS(Color Style Write
1602

FIG. 17

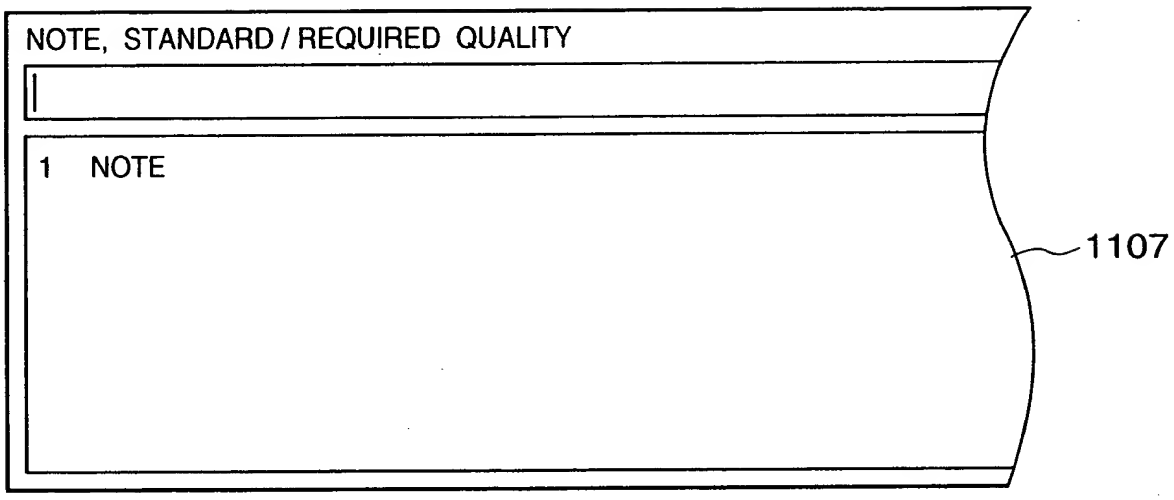


FIG. 18

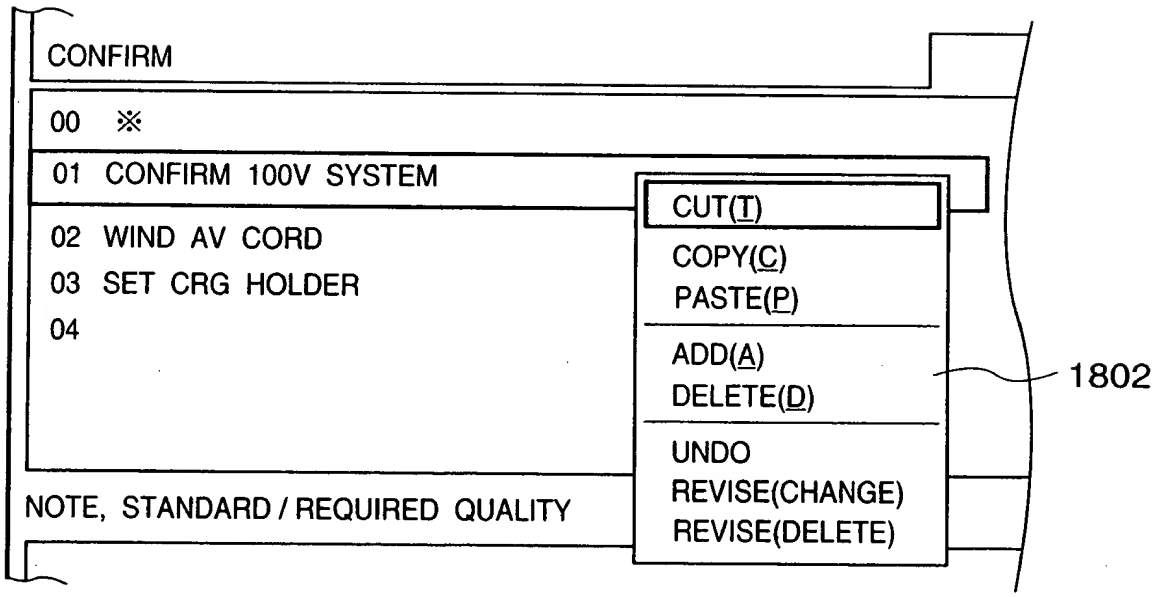

CONFIRM
00 ※
01 CONFIRM 100V SYSTEM
02 WIND AV CORD
03 SET CRG HOLDER
04
NOTE, STANDARD / REQUIRED QUALITY
CUT(T)
COPY(C)
PASTE(P)
ADD(A)
DELETE(D)
UNDO
REVISE(CHANGE)
REVISE(DELETE)
1802

FIG. 19

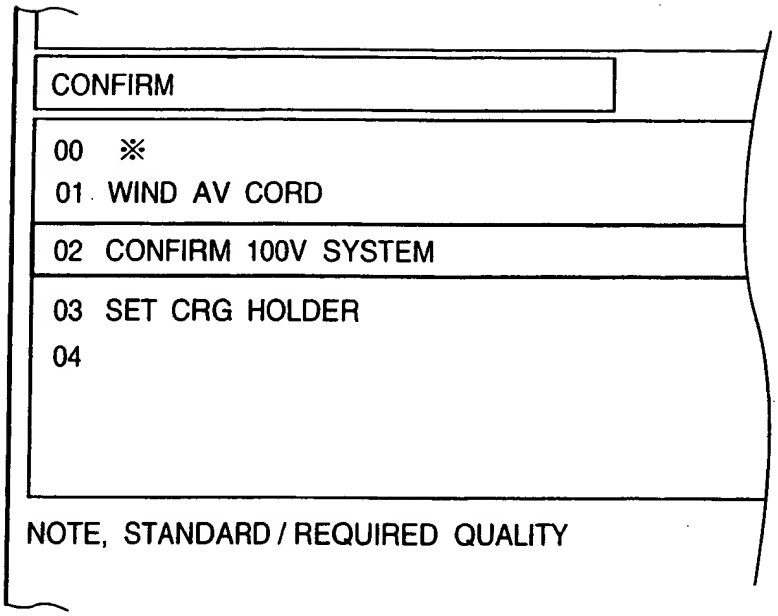

CONFIRM
00 ※
01 WIND AV CORD
02 CONFIRM 100V SYSTEM
03 SET CRG HOLDER
04
NOTE, STANDARD / REQUIRED QUALITY

FIG. 20

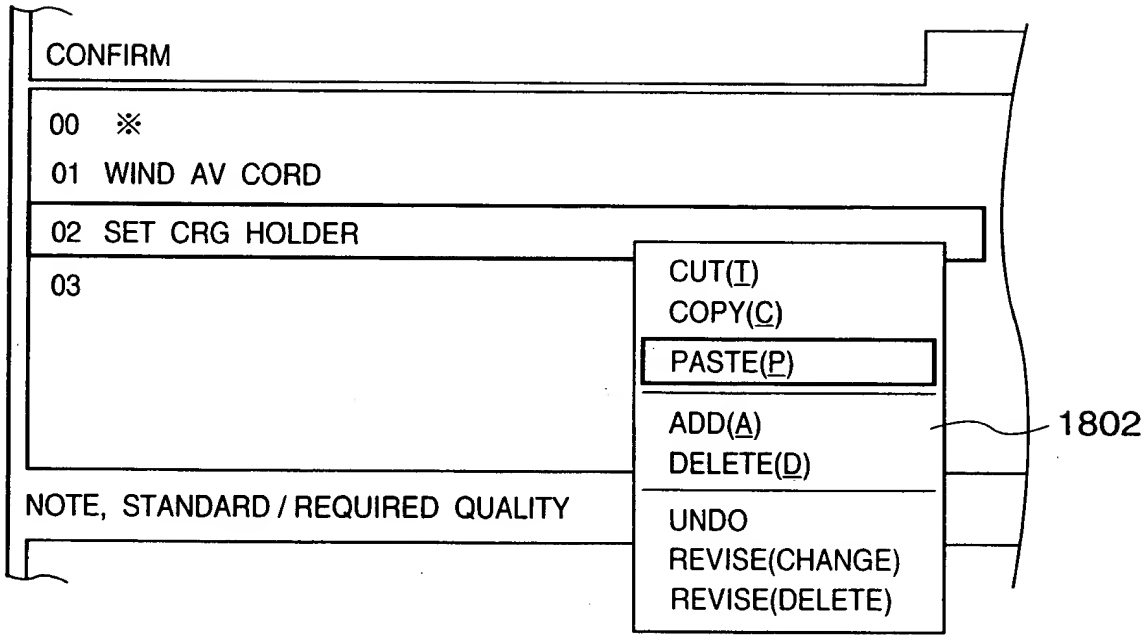

CONFIRM
00 ※
01 WIND AV CORD
02 SET CRG HOLDER
03
NOTE, STANDARD / REQUIRED QUALITY
CUT(T)
COPY(C)
PASTE(P)
ADD(A)
DELETE(D)
UNDO
REVISE(CHANGE)
REVISE(DELETE)
1802

FIG. 21

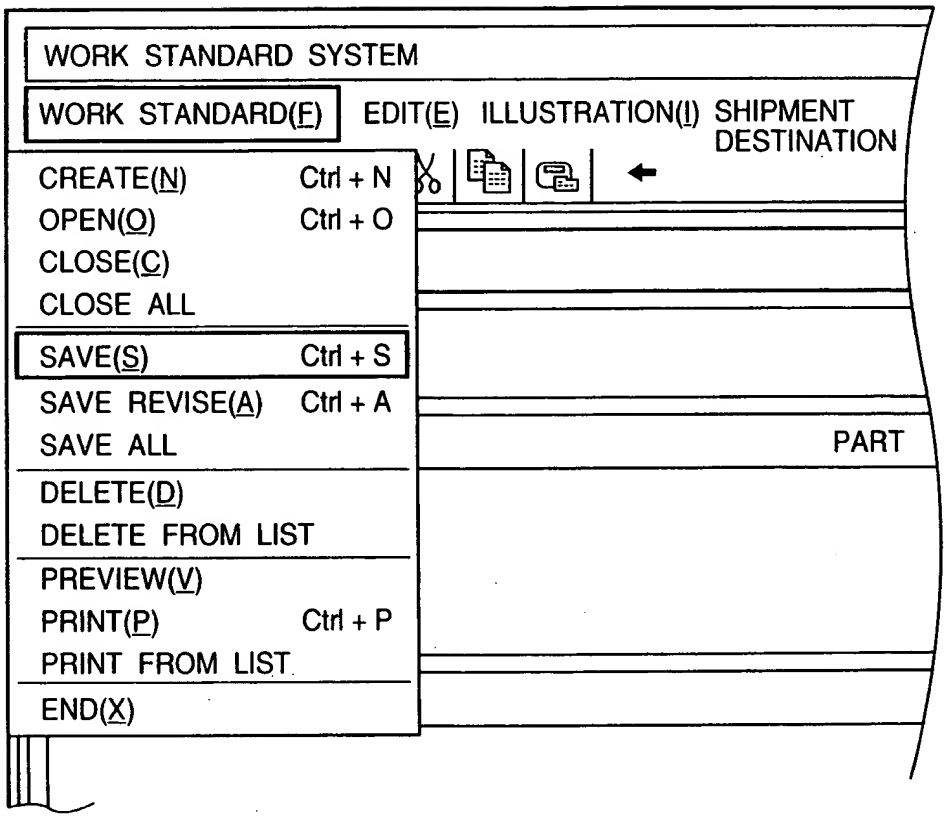

WORK STANDARD SYSTEM
WORK STANDARD(F)
EDIT(E)
ILLUSTRATION(I)
SHIPMENT DESTINATION
CREATE(N) Ctrl + N
OPEN(O) Ctrl + O
CLOSE(C)
CLOSE ALL
SAVE(S) Ctrl + S
SAVE REVISE(A) Ctrl + A
SAVE ALL
DELETE(D)
DELETE FROM LIST
PREVIEW(V)
PRINT(P) Ctrl + P
PRINT FROM LIST
END(X)
PART

FIG. 22

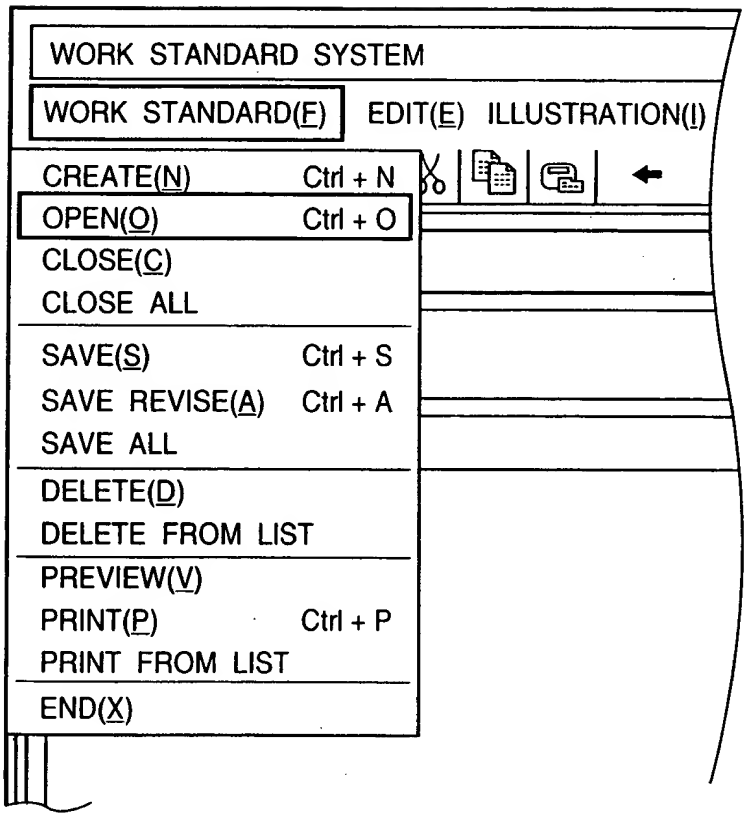

WORK STANDARD SYSTEM
WORK STANDARD(F)
EDIT(E)
ILLUSTRATION(I)
CREATE(N) Ctrl + N
OPEN(O) Ctrl + O
CLOSE(C)
CLOSE ALL
SAVE(S) Ctrl + S
SAVE REVISE(A) Ctrl + A
SAVE ALL
DELETE(D)
DELETE FROM LIST
PREVIEW(V)
PRINT(P) Ctrl + P
PRINT FROM LIST
END(X)

FIG. 23

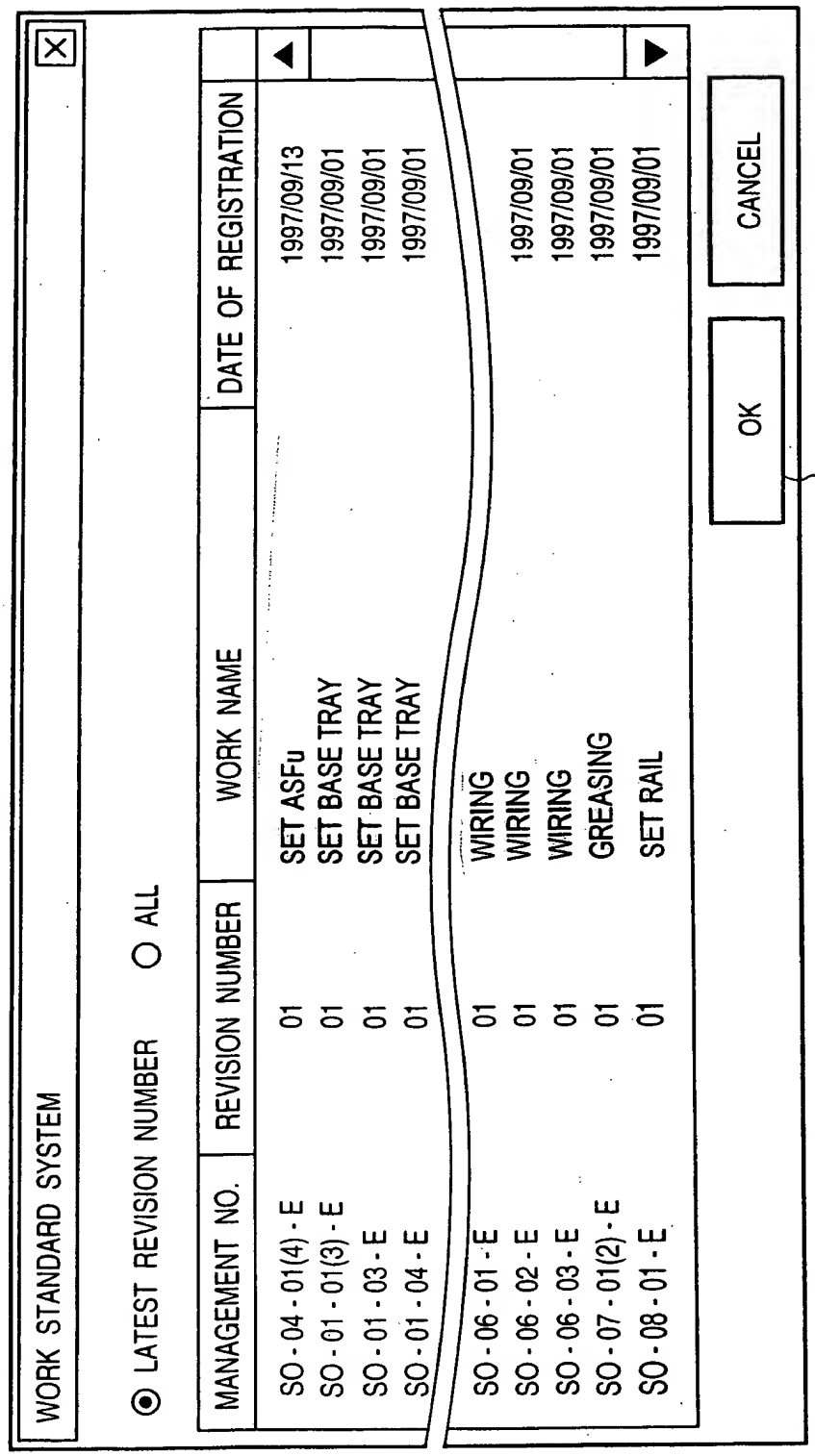

WORK STANDARD SYSTEM
LATEST REVISION NUMBER
ALL
MANAGEMENT NO.
REVISION NUMBER
WORK NAME
DATE OF REGISTRATION
SO - 04 - 01(4) - E
01
SET ASFu
1997/09/13
SO - 01 - 01(3) - E
01
SET BASE TRAY
1997/09/01
SO - 01 - 03 - E
01
SET BASE TRAY
1997/09/01
SO - 01 - 04 - E
01
SET BASE TRAY
1997/09/01
SO - 06 - 01 - E
01
WIRING
SO - 06 - 02 - E
01
WIRING
1997/09/01
SO - 06 - 03 - E
01
WIRING
1997/09/01
SO - 07 - 01(2) - E
01
GREASING
1997/09/01
SO - 08 - 01 - E
01
SET RAIL
1997/09/01
OK
CANCEL
2301

FIG. 24

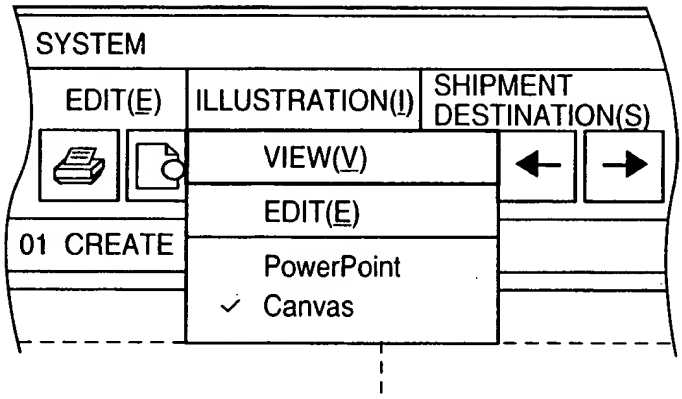

SYSTEM
EDIT(E)
ILLUSTRATION(I)
SHIPMENT DESTINATION(S)
VIEW(V)
EDIT(E)
01 CREATE
PowerPoint
✓ Canvas

FIG. 25

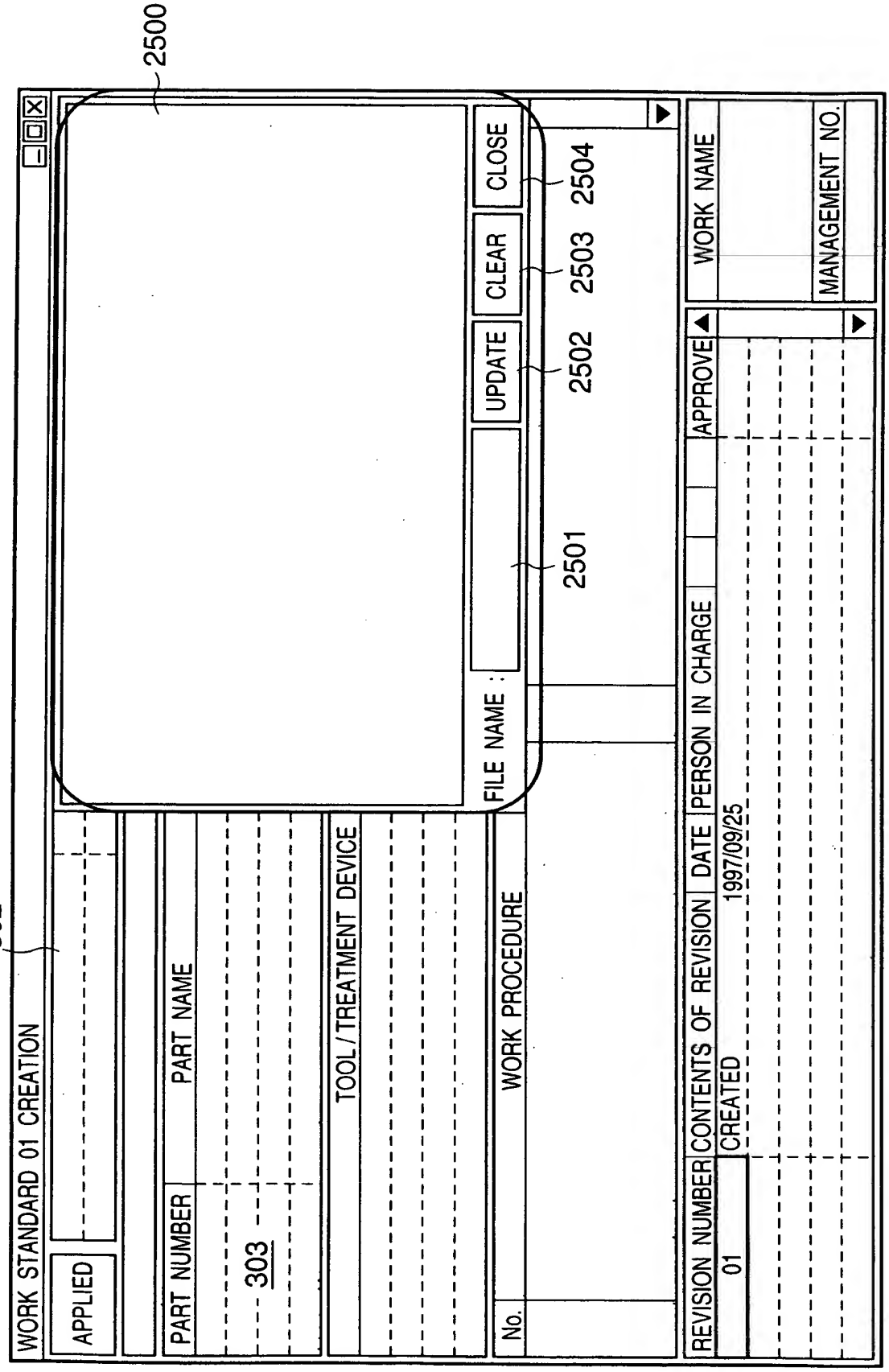

2500
302
WORK STANDARD 01 CREATION
APPLIED
PART NUMBER
PART NAME
303
TOOL / TREATMENT DEVICE
No.
WORK PROCEDURE
FILE NAME :
2501
UPDATE
CLEAR
CLOSE
2502
2503
2504
APPROVE
WORK NAME
MANAGEMENT NO.
REVISION NUMBER
CONTENTS OF REVISION
DATE
PERSON IN CHARGE
01
CREATED
1997/09/25

FIG. 26

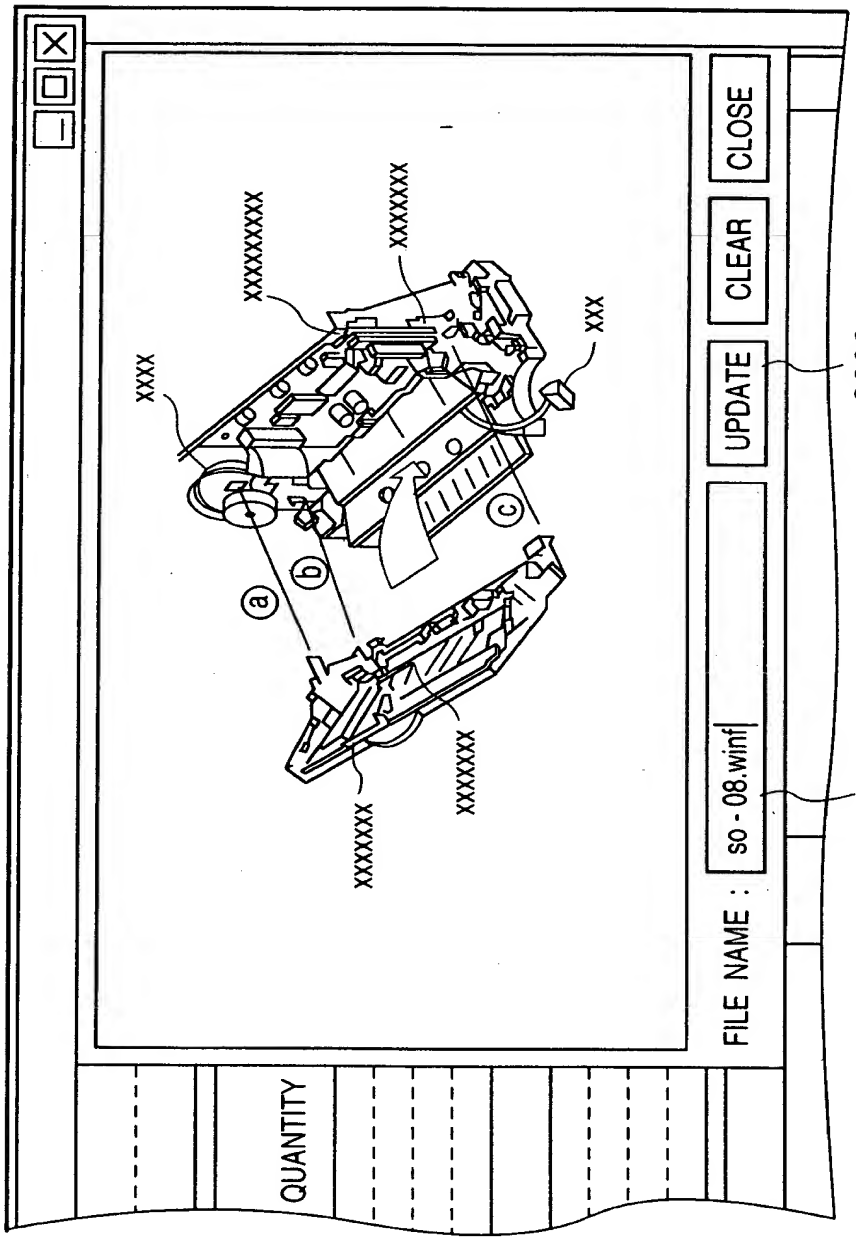

XXXXXXXXX
XXXXXXX
XXXX
XXX
ⓐ
ⓑ
ⓒ
XXXXXXX
XXXXXXX
QUANTITY
FILE NAME :
so - 08.winf
UPDATE
CLEAR
CLOSE
2601
2602

FIG. 27

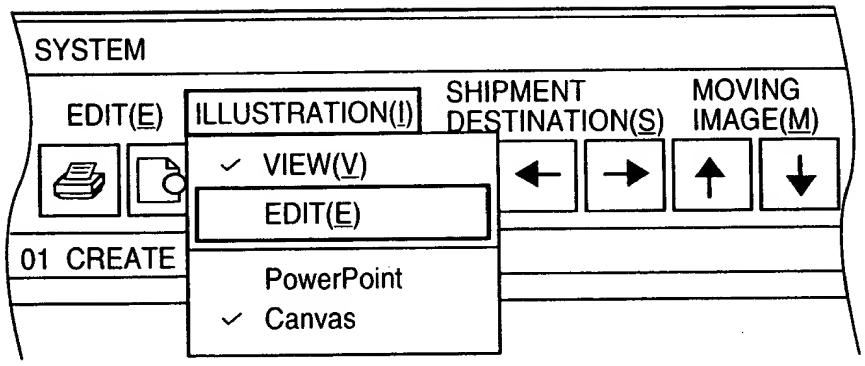

SYSTEM
EDIT(E)
ILLUSTRATION(I)
SHIPMENT DESTINATION(S)
MOVING IMAGE(M)
VIEW(V)
EDIT(E)
01 CREATE
PowerPoint
Canvas

FIG. 28

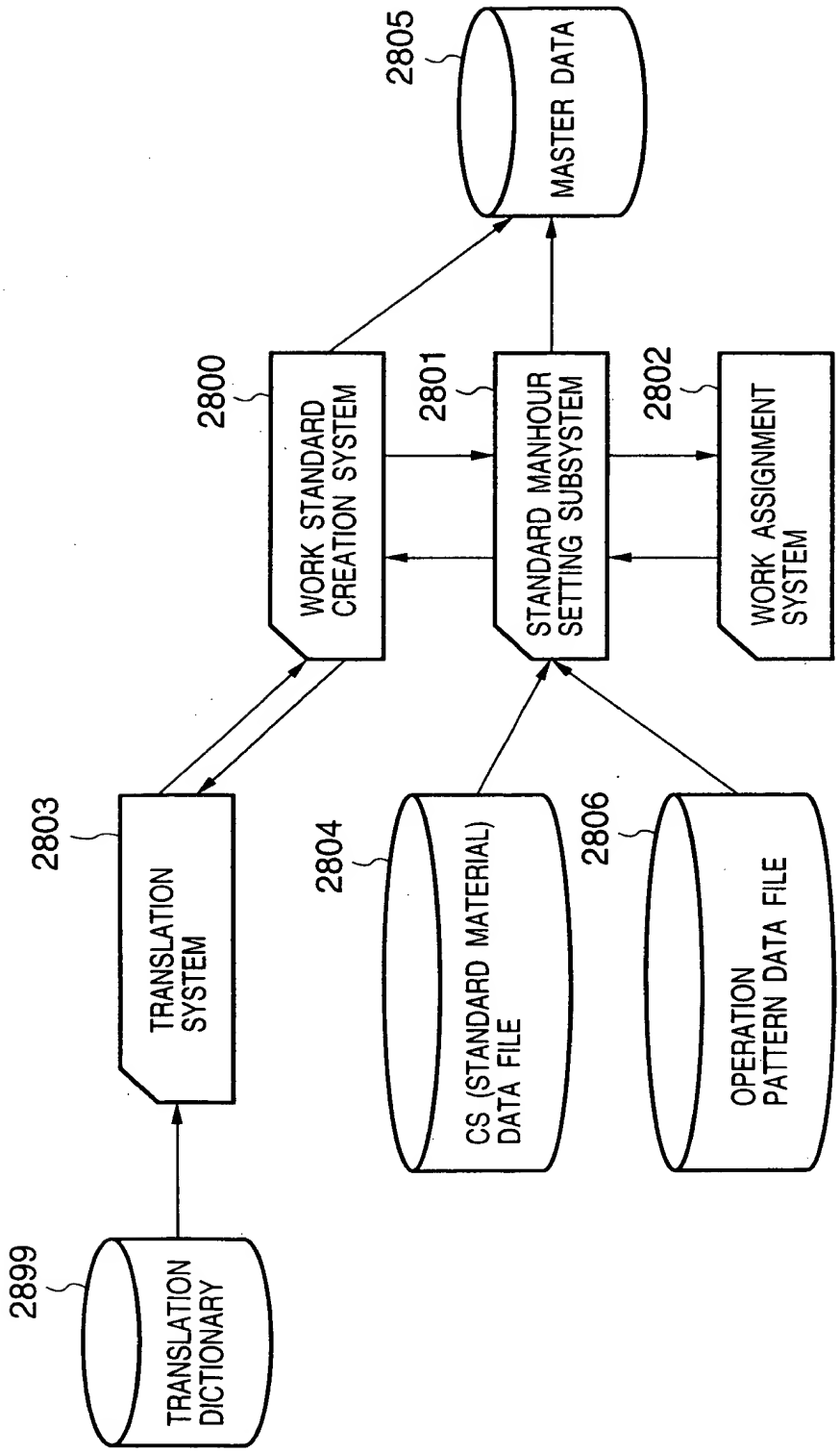

2805
MASTER DATA
2800
WORK STANDARD CREATION SYSTEM
2801
STANDARD MANHOUR SETTING SUBSYSTEM
2802
WORK ASSIGNMENT SYSTEM
2803
TRANSLATION SYSTEM
2804
CS (STANDARD MATERIAL) DATA FILE
2806
OPERATION PATTERN DATA FILE
2899
TRANSLATION DICTIONARY

FIG. 29

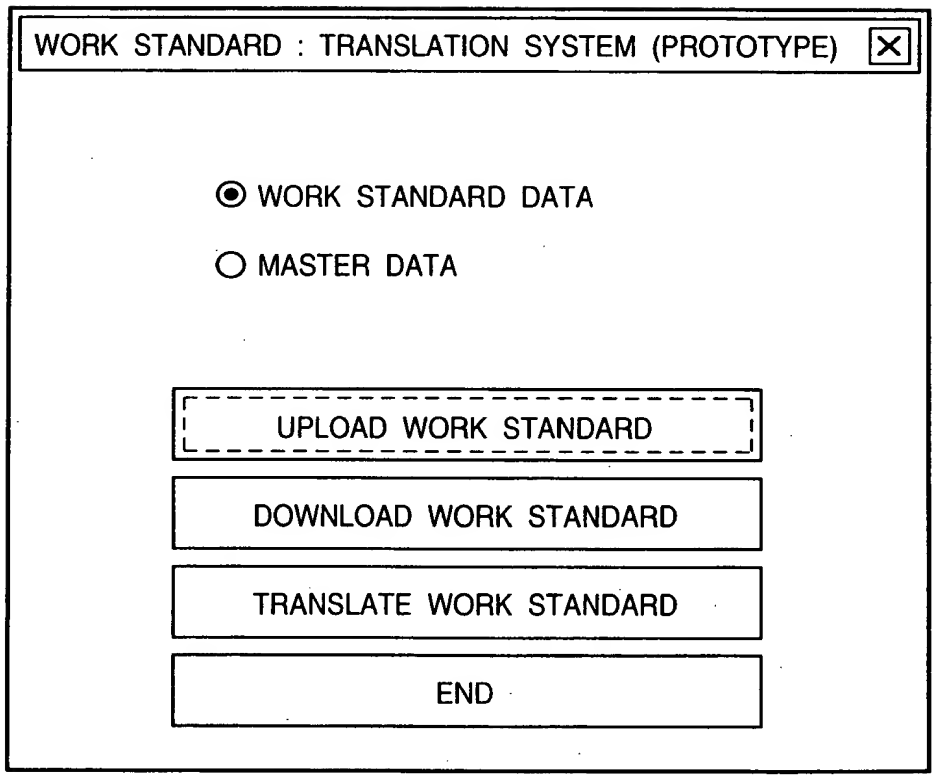

WORK STANDARD : TRANSLATION SYSTEM (PROTOTYPE)
WORK STANDARD DATA
MASTER DATA
UPLOAD WORK STANDARD
DOWNLOAD WORK STANDARD
TRANSLATE WORK STANDARD
END

FIG. 30

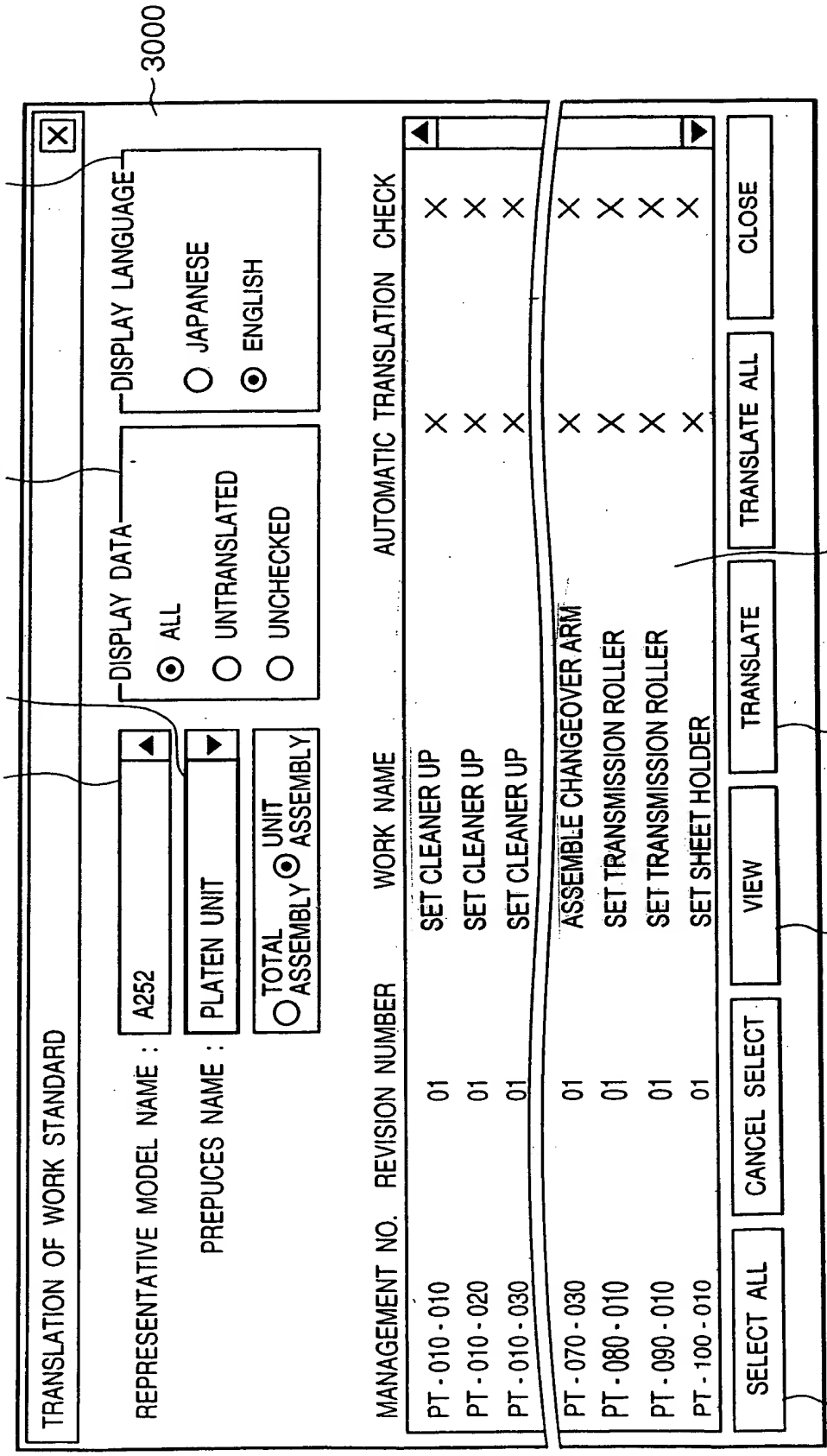

3000
3001
3002
3003
3004
3005
3006
3007
3008
TRANSLATION OF WORK STANDARD
REPRESENTATIVE MODEL NAME :
A252
PREPUCES NAME :
PLATEN UNIT
TOTAL ASSEMBLY
UNIT ASSEMBLY
DISPLAY DATA
ALL
UNTRANSLATED
UNCHECKED
DISPLAY LANGUAGE
JAPANESE
ENGLISH
MANAGEMENT NO.
REVISION NUMBER
WORK NAME
AUTOMATIC TRANSLATION CHECK
PT - 010 - 010
01
SET CLEANER UP
PT - 010 - 020
01
SET CLEANER UP
PT - 010 - 030
01
SET CLEANER UP
PT - 070 - 030
01
ASSEMBLE CHANGEOVER ARM
PT - 080 - 010
01
SET TRANSMISSION ROLLER
PT - 090 - 010
01
SET TRANSMISSION ROLLER
PT - 100 - 010
01
SET SHEET HOLDER
SELECT ALL
CANCEL SELECT
VIEW
TRANSLATE
TRANSLATE ALL
CLOSE

FIG. 31

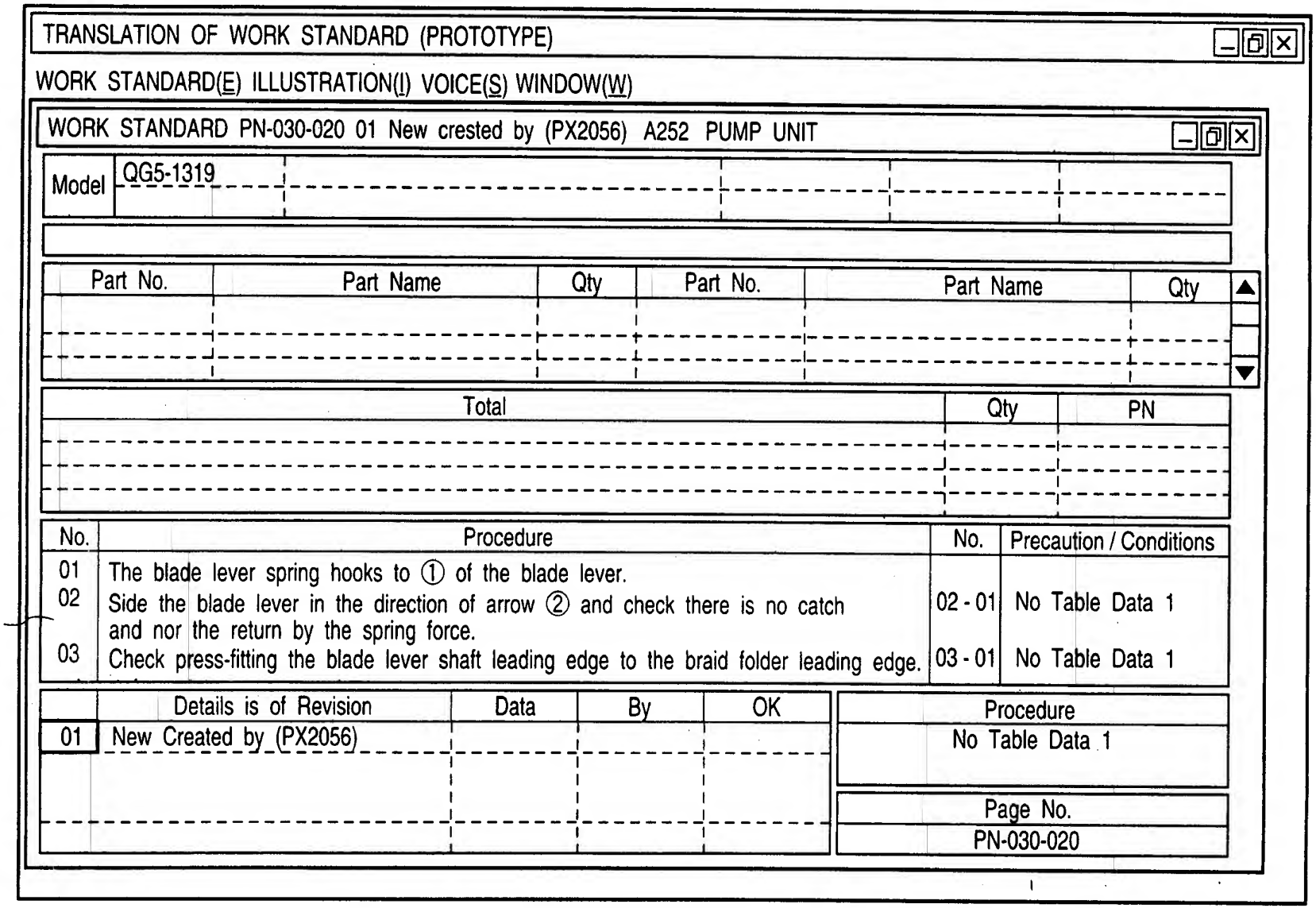

TRANSLATION OF WORK STANDARD (PROTOTYPE)
WORK STANDARD(E) ILLUSTRATION(I) VOICE(S) WINDOW(W)
WORK STANDARD PN-030-020 01 New crested by (PX2056) A252 PUMP UNIT
Model
QG5-1319
Part No.
Part Name
Qty
Part No.
Part Name
Qty
Total
Qty
PN
No.
Procedure
No.
Precaution / Conditions
01
The blade lever spring hooks to ① of the blade lever.
02
Side the blade lever in the direction of arrow ② and check there is no catch and nor the return by the spring force.
02 - 01
No Table Data 1
03
Check press-fitting the blade lever shaft leading edge to the braid folder leading edge.
03 - 01
No Table Data 1
Details is of Revision
Data
By
OK
01
New Created by (PX2056)
Procedure
No Table Data 1
Page No.
PN-030-020
3101

FIG. 32

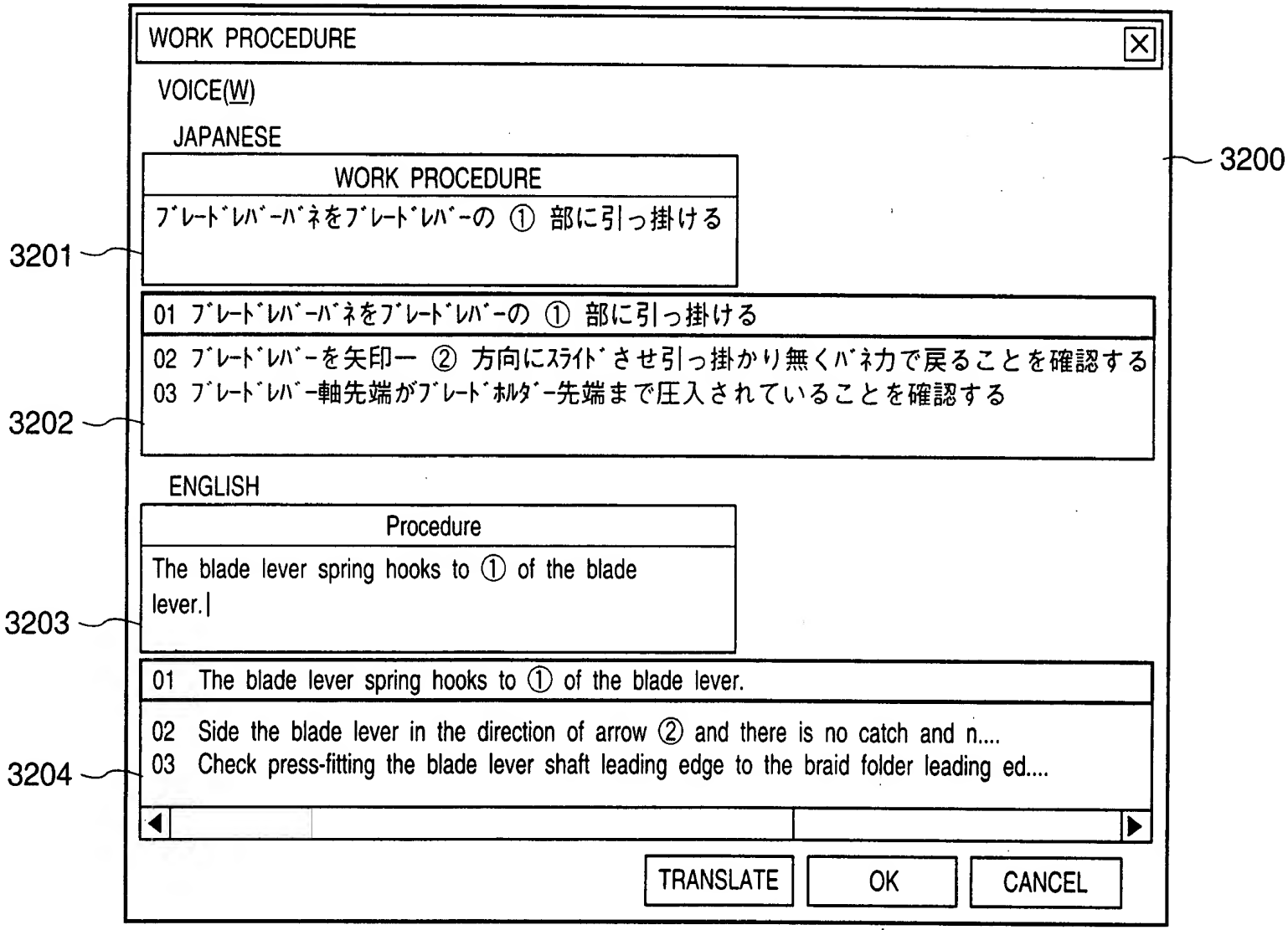

WORK PROCEDURE
VOICE(W)
JAPANESE
WORK PROCEDURE
ﾌﾞﾚｰﾄﾞﾚﾊﾞｰﾊﾞﾈをﾌﾞﾚｰﾄﾞﾚﾊﾞｰの ① 部に引っ掛ける
01 ﾌﾞﾚｰﾄﾞﾚﾊﾞｰﾊﾞﾈをﾌﾞﾚｰﾄﾞﾚﾊﾞｰの ① 部に引っ掛ける
02 ﾌﾞﾚｰﾄﾞﾚﾊﾞｰを矢印一 ② 方向にｽﾗｲﾄﾞさせ引っ掛かり無くﾊﾞﾈ力で戻ることを確認する
03 ﾌﾞﾚｰﾄﾞﾚﾊﾞｰ軸先端がﾌﾞﾚｰﾄﾞﾎﾙﾀﾞｰ先端まで圧入されていることを確認する
ENGLISH
Procedure
The blade lever spring hooks to ① of the blade lever.
01 The blade lever spring hooks to ① of the blade lever.
02 Side the blade lever in the direction of arrow ② and there is no catch and n....
03 Check press-fitting the blade lever shaft leading edge to the braid folder leading ed....
TRANSLATE
OK
CANCEL
3200
3201
3202
3203
3204

FIG. 33

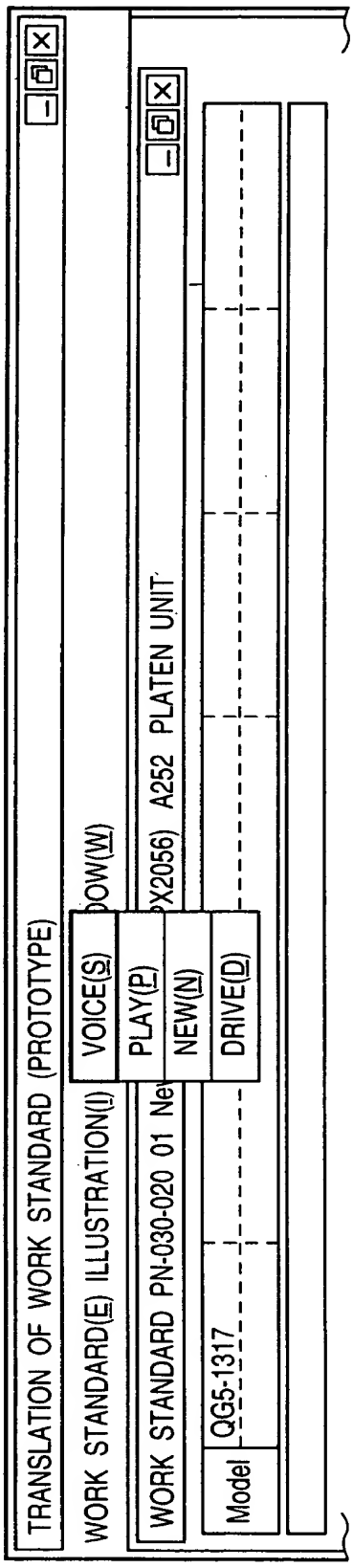

TRANSLATION OF WORK STANDARD (PROTOTYPE)
WORK STANDARD(E) ILLUSTRATION(I)
DOW(W)
VOICE(S)
PLAY(P)
NEW(N)
DRIVE(D)
WORK STANDARD PN-030-020 01 Ne
X2056) A252 PLATEN UNIT
Model
QG5-1317

FIG. 34

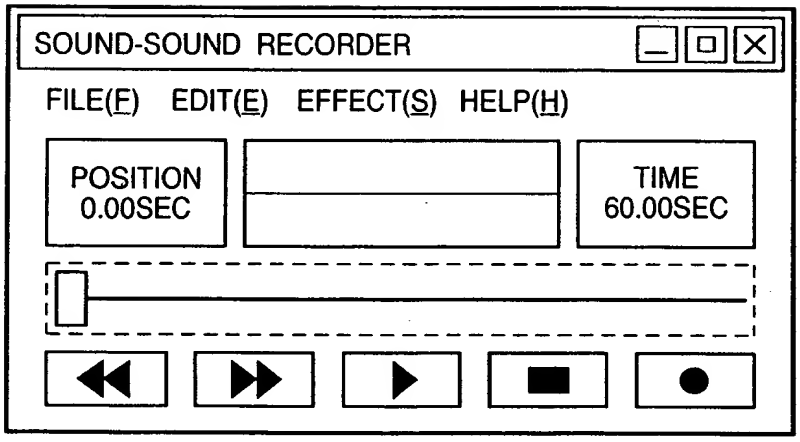

SOUND-SOUND RECORDER
FILE(F) EDIT(E) EFFECT(S) HELP(H)
POSITION
0.00SEC
TIME
60.00SEC

FIG. 35

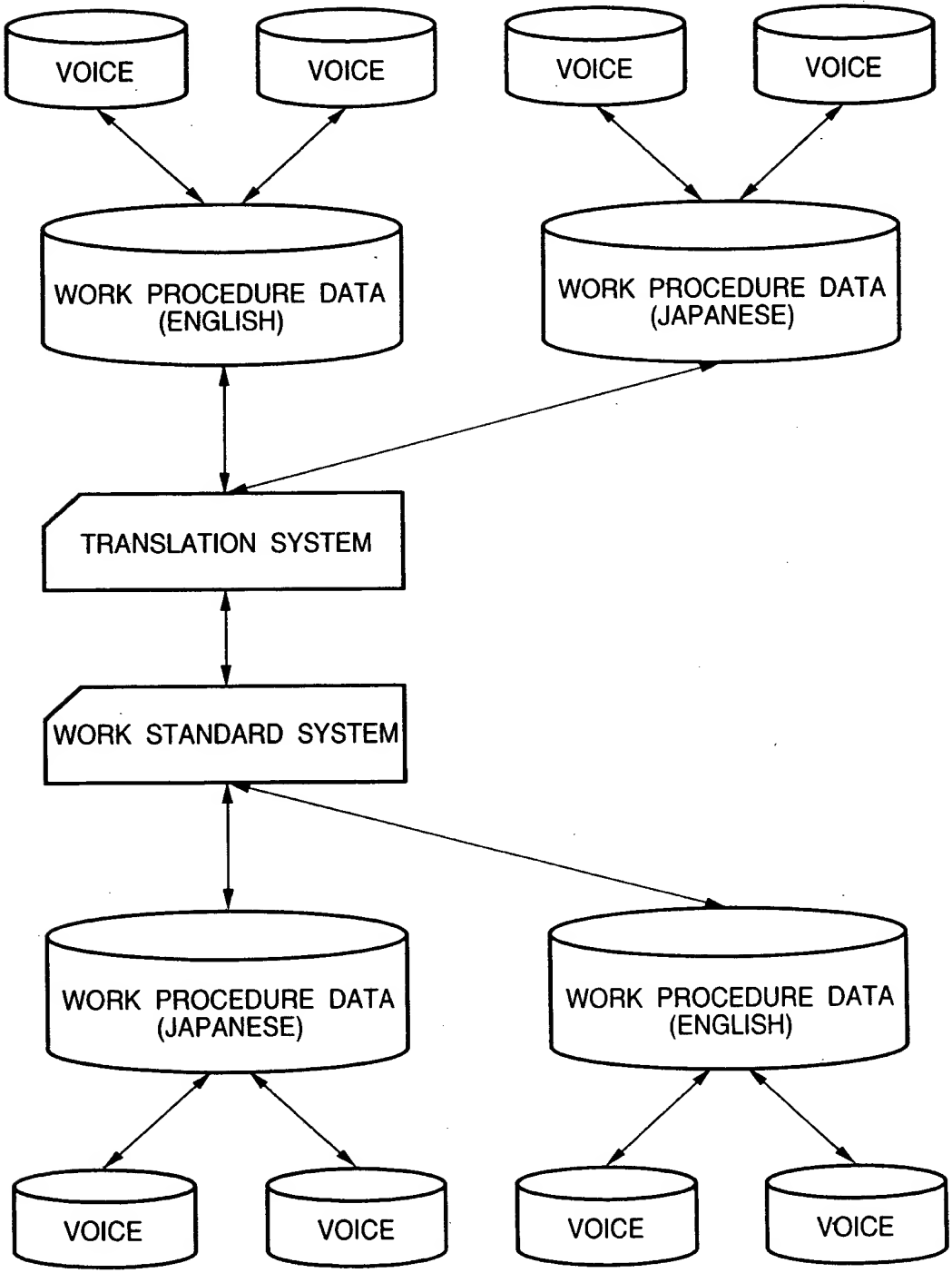

VOICE
VOICE
VOICE
VOICE
WORK PROCEDURE DATA (ENGLISH)
WORK PROCEDURE DATA (JAPANESE)
TRANSLATION SYSTEM
WORK STANDARD SYSTEM
WORK PROCEDURE DATA (JAPANESE)
WORK PROCEDURE DATA (ENGLISH)
VOICE
VOICE
VOICE
VOICE

FIG. 36

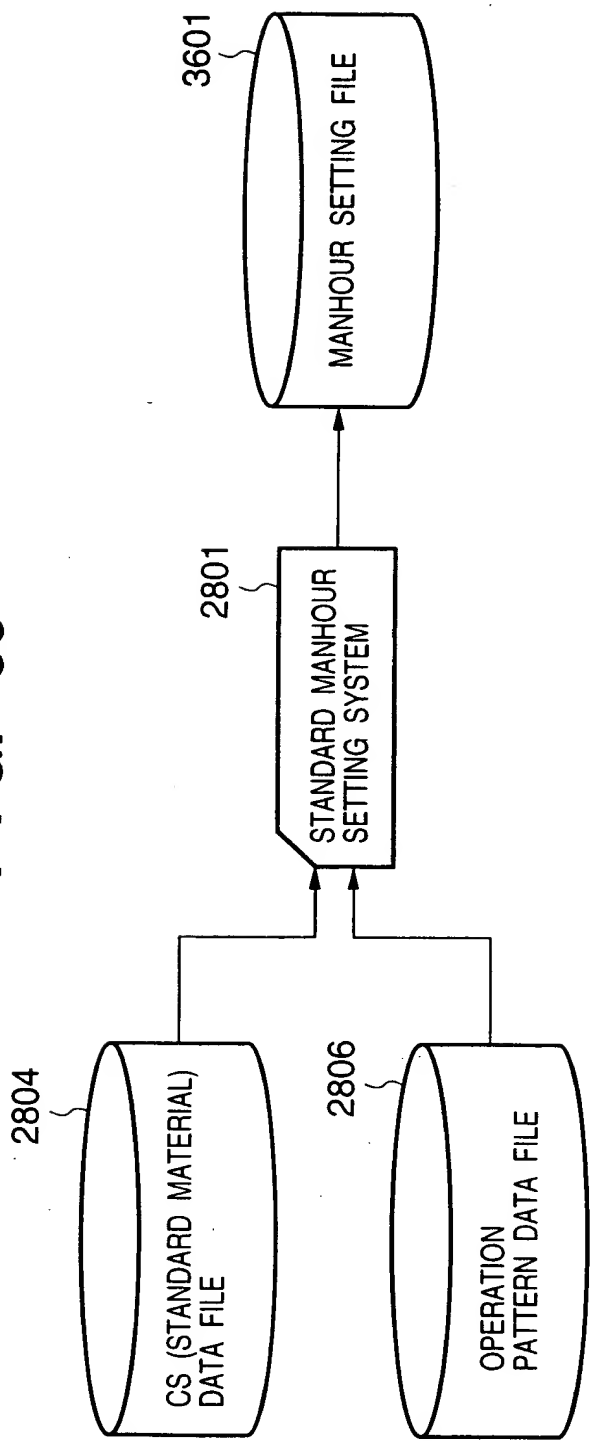

3601
MANHOUR SETTING FILE
2801
STANDARD MANHOUR SETTING SYSTEM
2804
CS (STANDARD MATERIAL) DATA FILE
2806
OPERATION PATTERN DATA FILE

FIG. 37

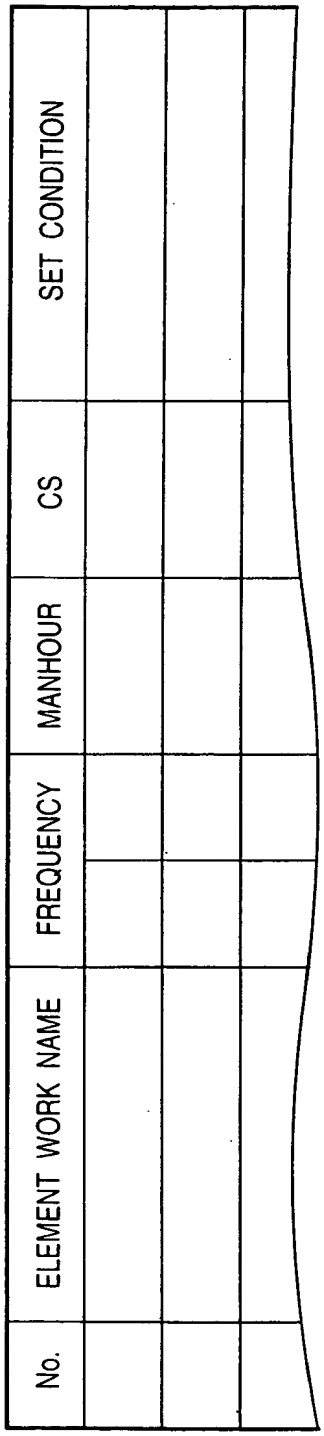


FIG. 38

STANDARD MATERIAL DATA

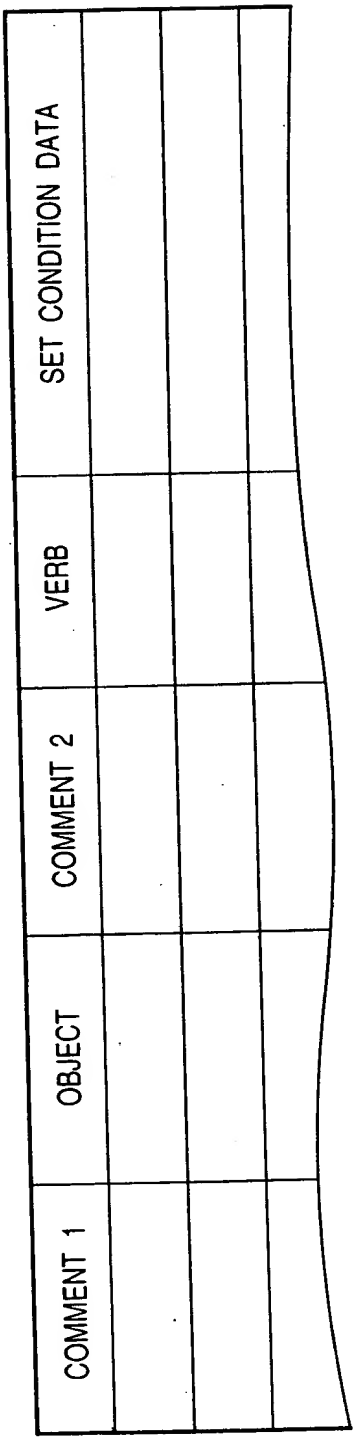


FIG. 39

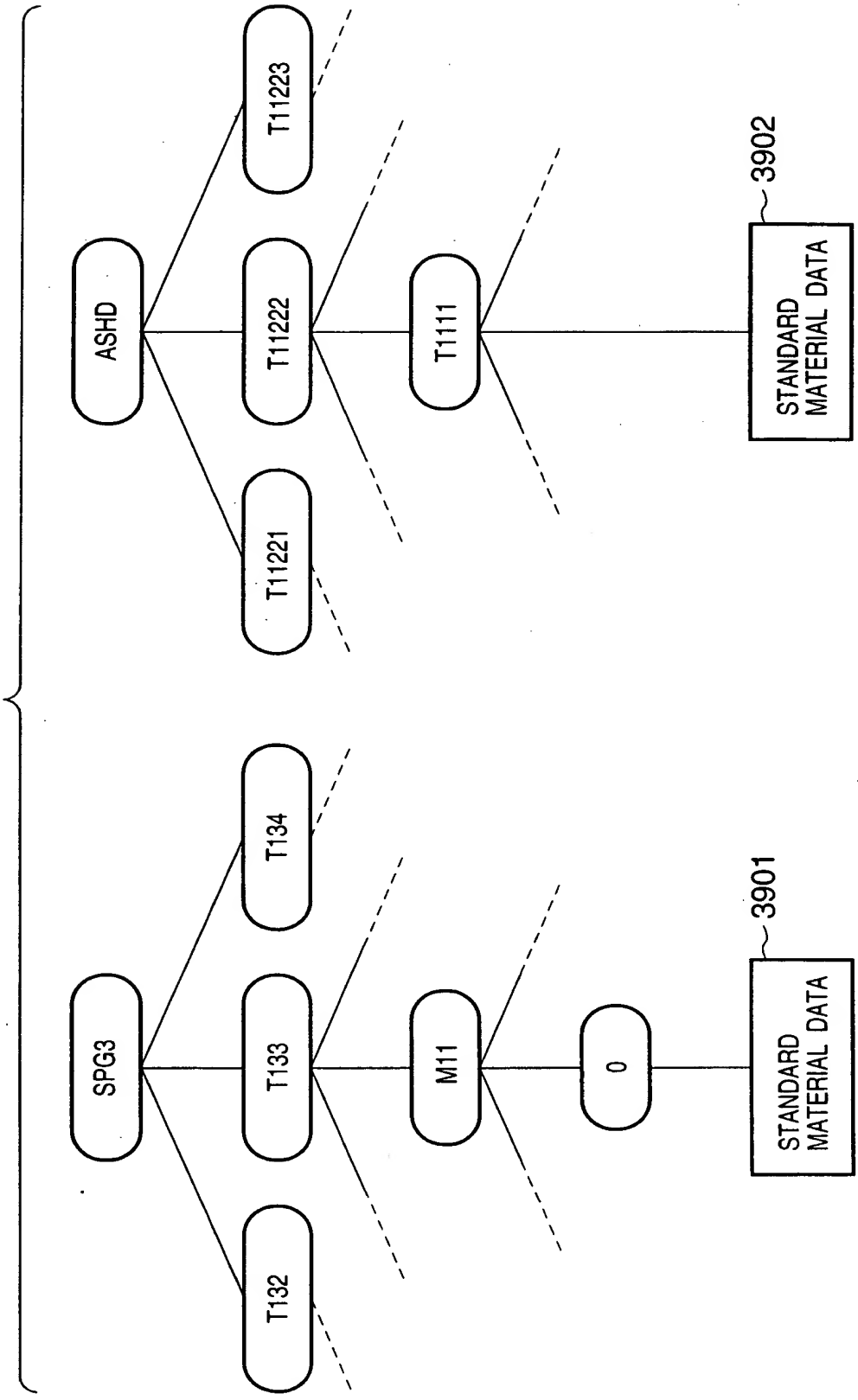

SPG3
T132
T133
T134
M11
0
3901
STANDARD MATERIAL DATA
ASHD
T11221
T11222
T11223
T1111
3902
STANDARD MATERIAL DATA

FIG. 40

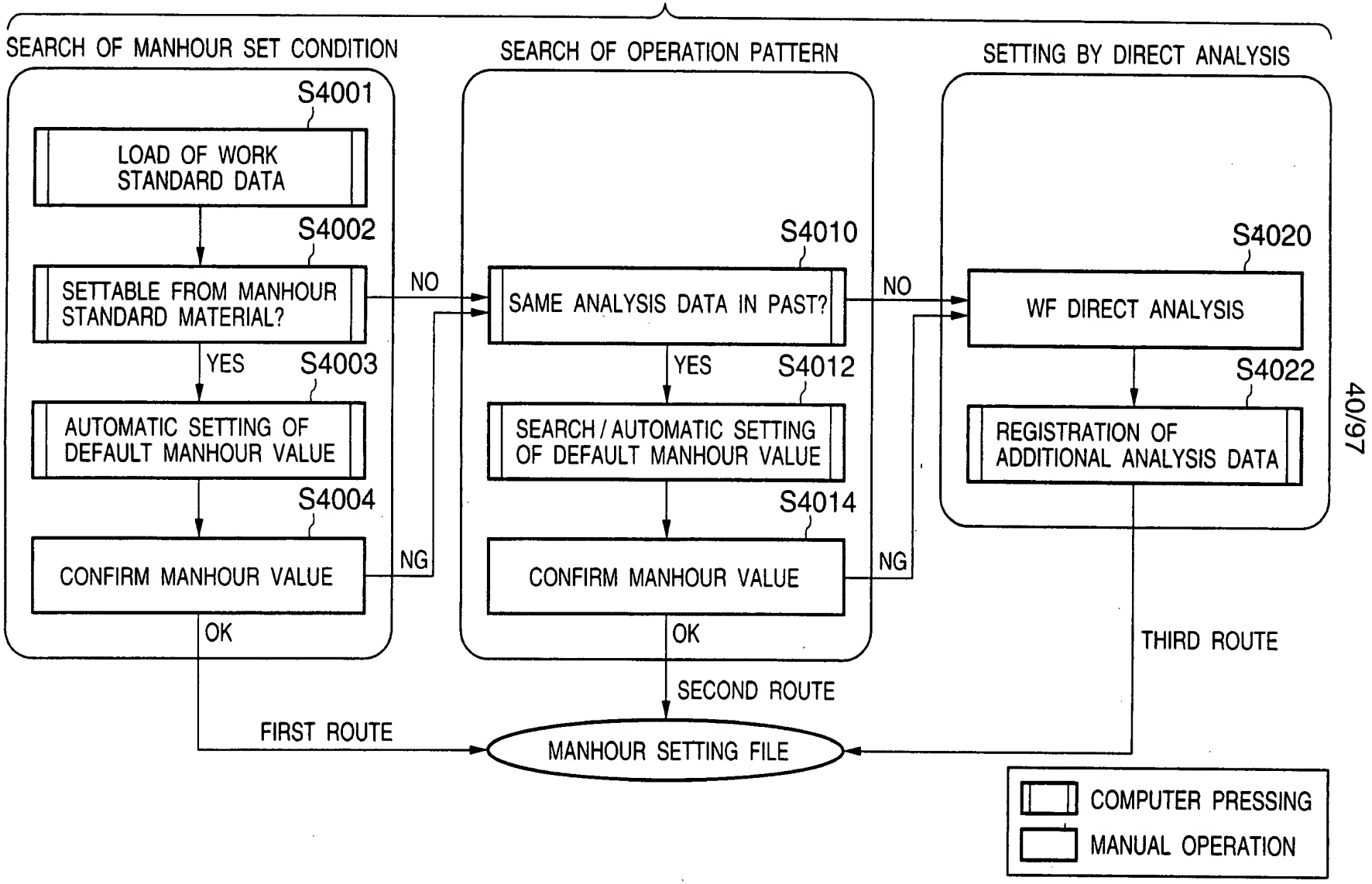

SEARCH OF MANHOUR SET CONDITION
SEARCH OF OPERATION PATTERN
SETTING BY DIRECT ANALYSIS
S4001
LOAD OF WORK STANDARD DATA
S4002
SETTABLE FROM MANHOUR STANDARD MATERIAL?
NO
YES
S4003
AUTOMATIC SETTING OF DEFAULT MANHOUR VALUE
S4004
CONFIRM MANHOUR VALUE
NG
OK
S4010
SAME ANALYSIS DATA IN PAST?
NO
YES
S4012
SEARCH / AUTOMATIC SETTING OF DEFAULT MANHOUR VALUE
S4014
CONFIRM MANHOUR VALUE
NG
OK
S4020
WF DIRECT ANALYSIS
S4022
REGISTRATION OF ADDITIONAL ANALYSIS DATA
THIRD ROUTE
SECOND ROUTE
FIRST ROUTE
MANHOUR SETTING FILE
COMPUTER PRESSING
MANUAL OPERATION

FIG. 41

3601

EDITING OF ELEMENT WORK

FILE(F) EDIT(E) VIEW(V) ANALYZE(A) ANALYSIS MATERIAL(B) CS(S) END(X)

UNIT WORK NAME : SEPARATION ROLLER ATTACHMENT

No.	ELEMENT WORK NAME	FREQUENCY		MANHOUR	CS	SET CONDITION	
1	(SET LOAD SPRING IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING)	1	1				
2	(TURN ON SW OF TREATMENT DEVICE)	1	1				
3	(SET SEPARATION ROLLER SHAFT IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING)	1	1				
4	(TURN OFF SW OF TREAMENT DEVICE)	1	1				
5	(DETACH SEPARATION ROLLER SHAFT FROM TREAMENT DEVICE)	1	1				

DATA LOAD

• ELEMENT WORK NAME

No.	COMMENT 1	OBJECT	COMMENT 2	VERB
1		LOAD SPRING	IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING	SET
2	OF TREATMENT DEVICE	SW		TURN ON
3		SEPARATION ROLLER	IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING	SET
4	OF TREATMENT DEVICE	SW		TURN OFF
5		SEPARATION ROLLER	FROM TREATMENT DEVICE	DETACH

FIG. 42

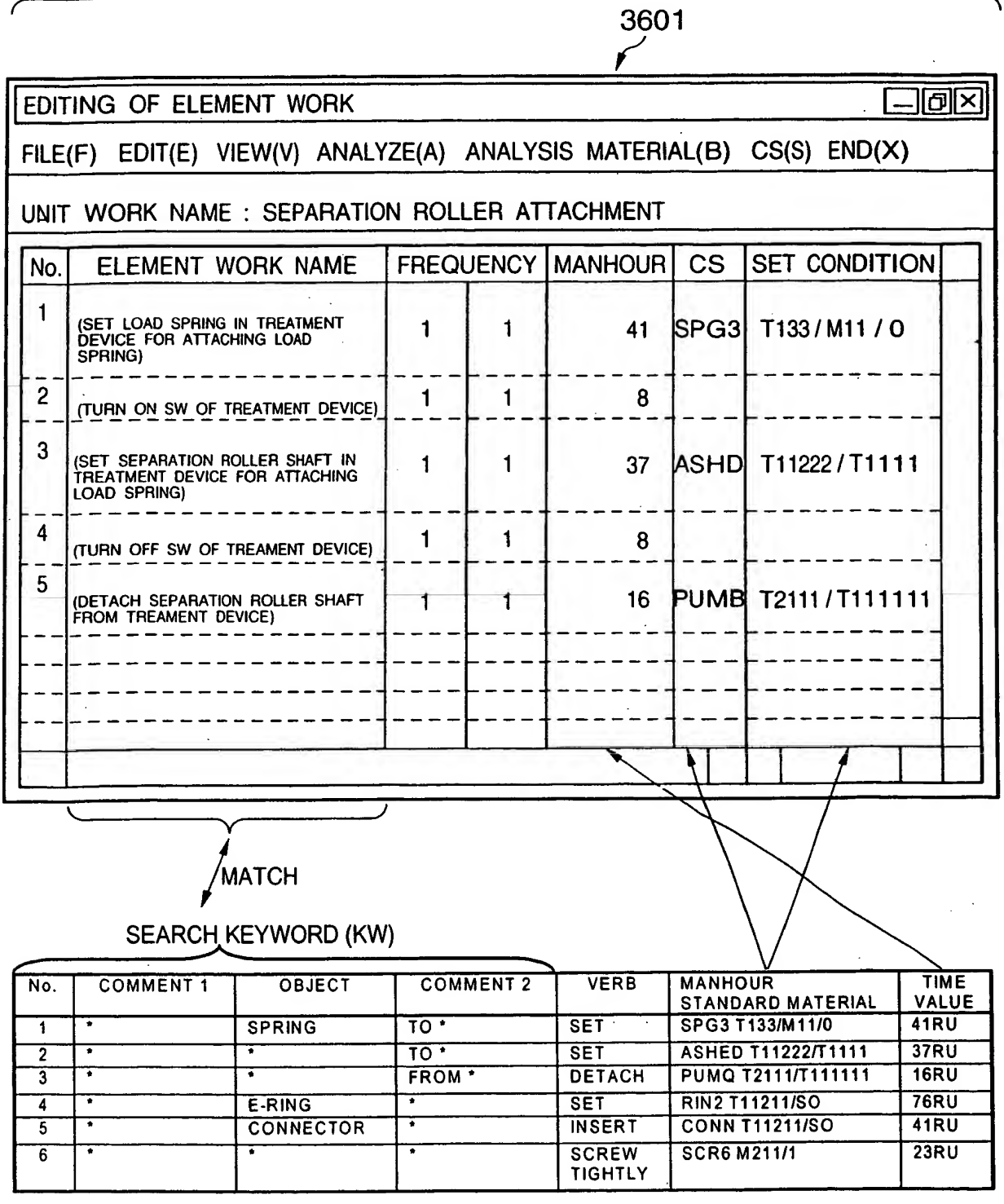
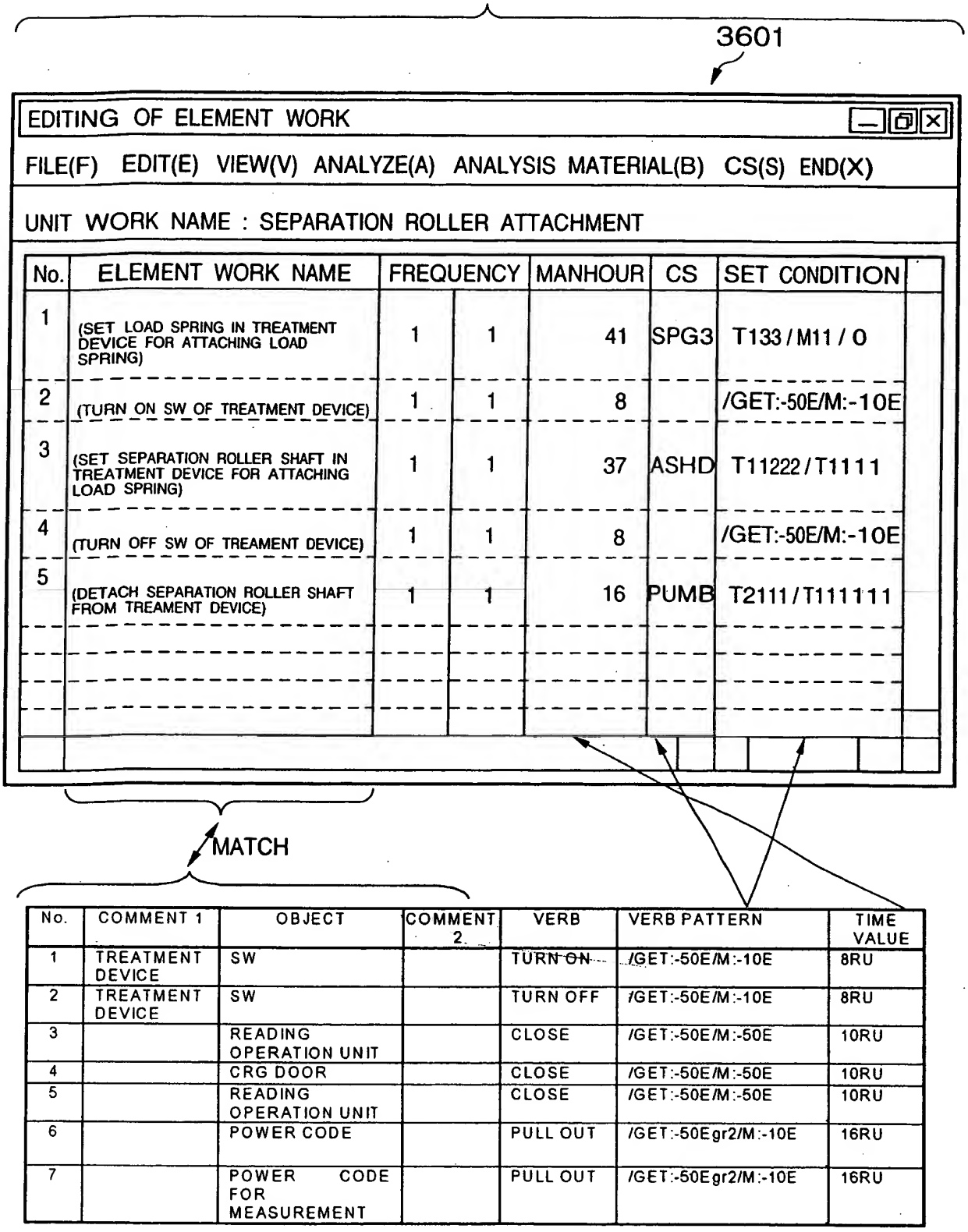

3601
EDITING OF ELEMENT WORK
FILE(F) EDIT(E) VIEW(V) ANALYZE(A) ANALYSIS MATERIAL(B) CS(S) END(X)
UNIT WORK NAME : SEPARATION ROLLER ATTACHMENT
No. | ELEMENT WORK NAME | FREQUENCY | | MANHOUR | CS | SET CONDITION
1 | (SET LOAD SPRING IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING) | 1 | 1 | 41 | SPG3 | T133 / M11 / 0
2 | (TURN ON SW OF TREATMENT DEVICE) | 1 | 1 | 8 | |
3 | (SET SEPARATION ROLLER SHAFT IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING) | 1 | 1 | 37 | ASHD | T11222 / T1111
4 | (TURN OFF SW OF TREAMENT DEVICE) | 1 | 1 | 8 | |
5 | (DETACH SEPARATION ROLLER SHAFT FROM TREAMENT DEVICE) | 1 | 1 | 16 | PUMB | T2111 / T111111
MATCH
SEARCH KEYWORD (KW)
No. | COMMENT 1 | OBJECT | COMMENT 2 | VERB | MANHOUR STANDARD MATERIAL | TIME VALUE
1 | * | SPRING | TO * | SET | SPG3 T133/M11/0 | 41RU
2 | * | * | TO * | SET | ASHED T11222/T1111 | 37RU
3 | * | * | FROM * | DETACH | PUMQ T2111/T111111 | 16RU
4 | * | E-RING | * | SET | RIN2 T11211/SO | 76RU
5 | * | CONNECTOR | * | INSERT | CONN T11211/SO | 41RU
6 | * | * | * | SCREW TIGHTLY | SCR6 M211/1 | 23RU
2804

FIG. 43



No.	COMMENT 1	OBJECT	COMMENT 2	VERB	VERB PATTERN	TIME VALUE
1	TREATMENT DEVICE	SW		TURN ON	/GET:-50E/M:-10E	8RU
2	TREATMENT DEVICE	SW		TURN OFF	/GET:-50E/M:-10E	8RU
3		READING OPERATION UNIT		CLOSE	/GET:-50E/M:-50E	10RU
4		CRG DOOR		CLOSE	/GET:-50E/M:-50E	10RU
5		READING OPERATION UNIT		CLOSE	/GET:-50E/M:-50E	10RU
6		POWER CODE		PULL OUT	/GET:-50Egr2/M:-10E	16RU
7		POWER CODE FOR MEASUREMENT		PULL OUT	/GET:-50Egr2/M:-10E	16RU

2806

FIG. 44

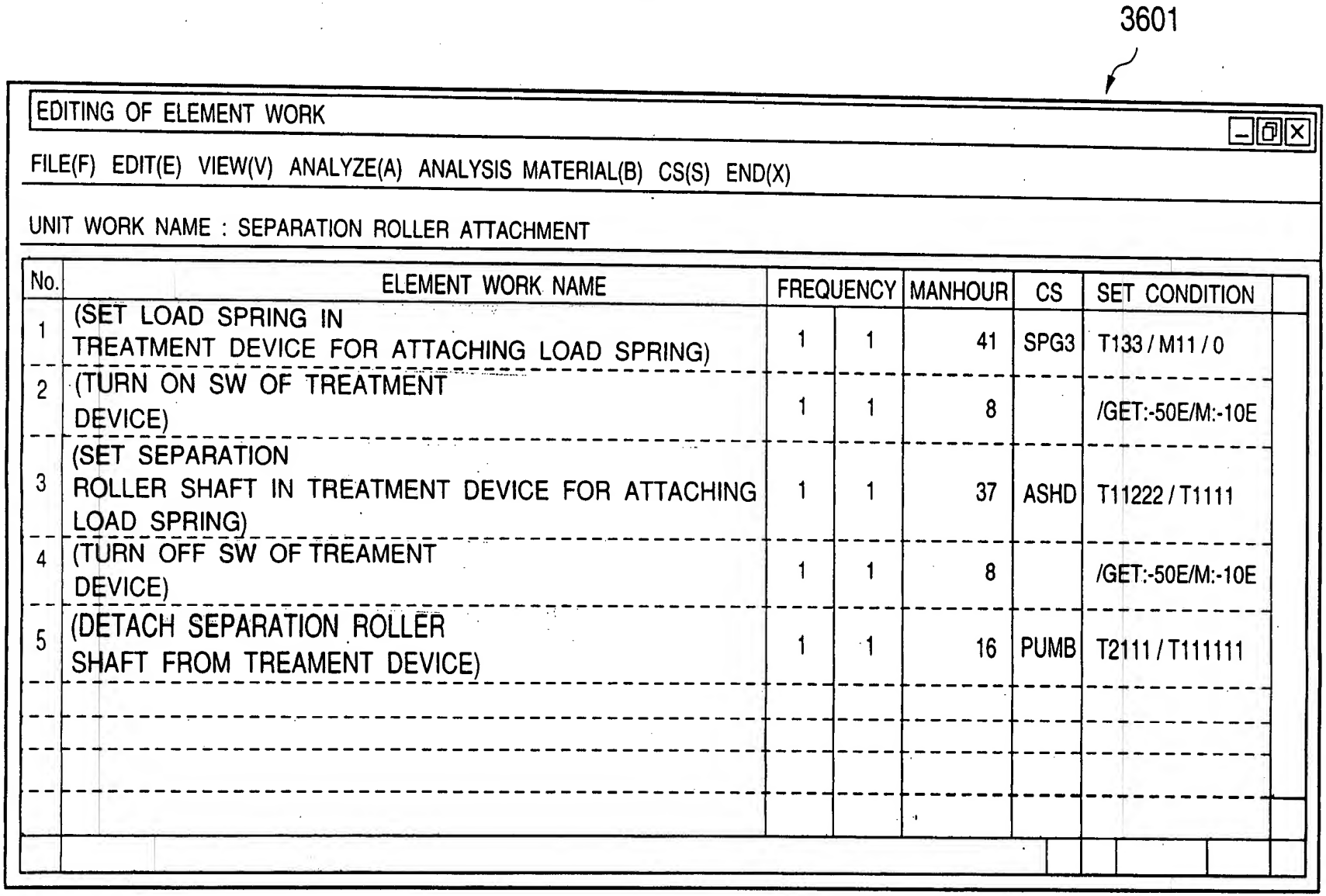

3601
EDITING OF ELEMENT WORK
FILE(F) EDIT(E) VIEW(V) ANALYZE(A) ANALYSIS MATERIAL(B) CS(S) END(X)
UNIT WORK NAME : SEPARATION ROLLER ATTACHMENT
No.
ELEMENT WORK NAME
FREQUENCY
MANHOUR
CS
SET CONDITION
1
(SET LOAD SPRING IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING)
1
1
41
SPG3
T133 / M11 / 0
2
(TURN ON SW OF TREATMENT DEVICE)
1
1
8
/GET:-50E/M:-10E
3
(SET SEPARATION ROLLER SHAFT IN TREATMENT DEVICE FOR ATTACHING LOAD SPRING)
1
1
37
ASHD
T11222 / T1111
4
(TURN OFF SW OF TREAMENT DEVICE)
1
1
8
/GET:-50E/M:-10E
5
(DETACH SEPARATION ROLLER SHAFT FROM TREAMENT DEVICE)
1
1
16
PUMB
T2111 / T111111

FIG. 45

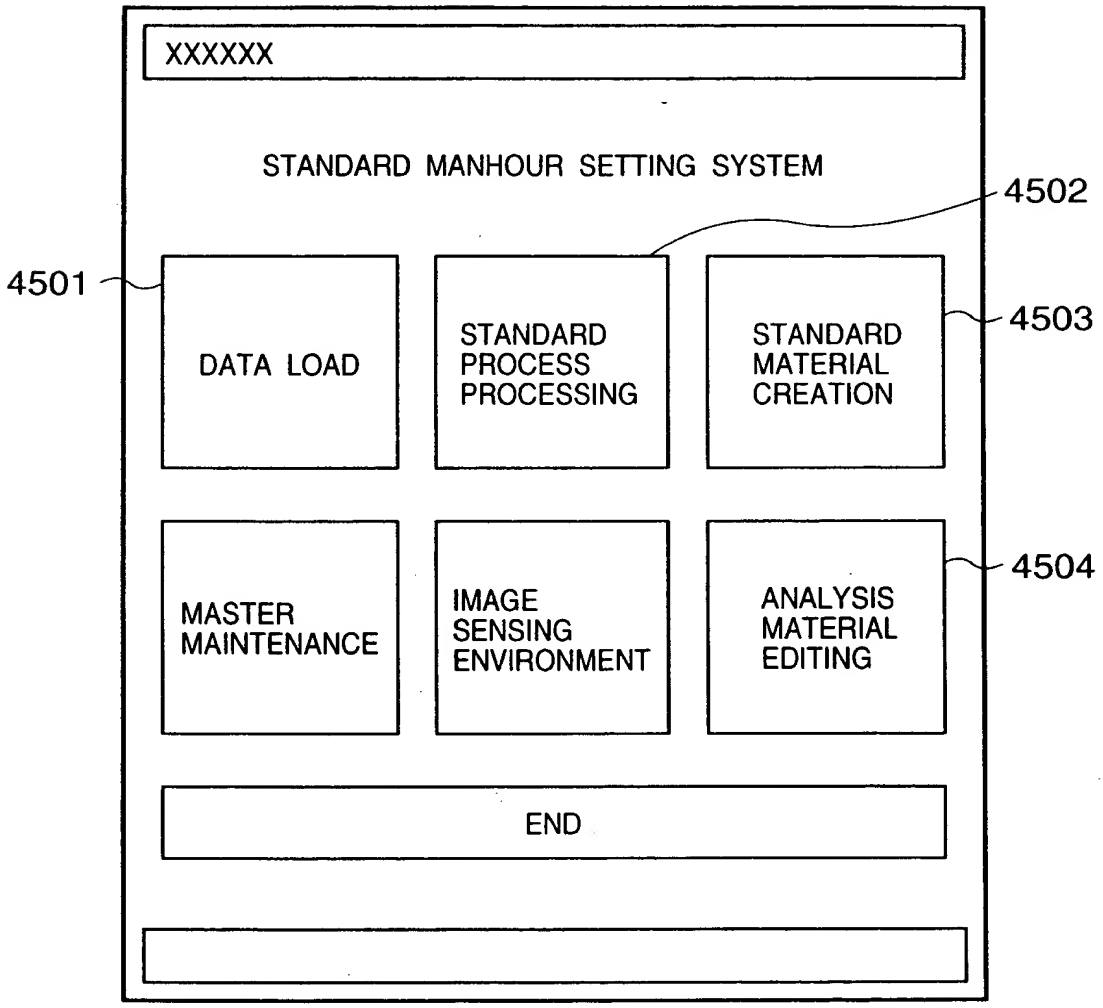

XXXXXX
STANDARD MANHOUR SETTING SYSTEM
4501
4502
4503
4504
DATA LOAD
STANDARD PROCESS PROCESSING
STANDARD MATERIAL CREATION
MASTER MAINTENANCE
IMAGE SENSING ENVIRONMENT
ANALYSIS MATERIAL EDITING
END

FIG. 46

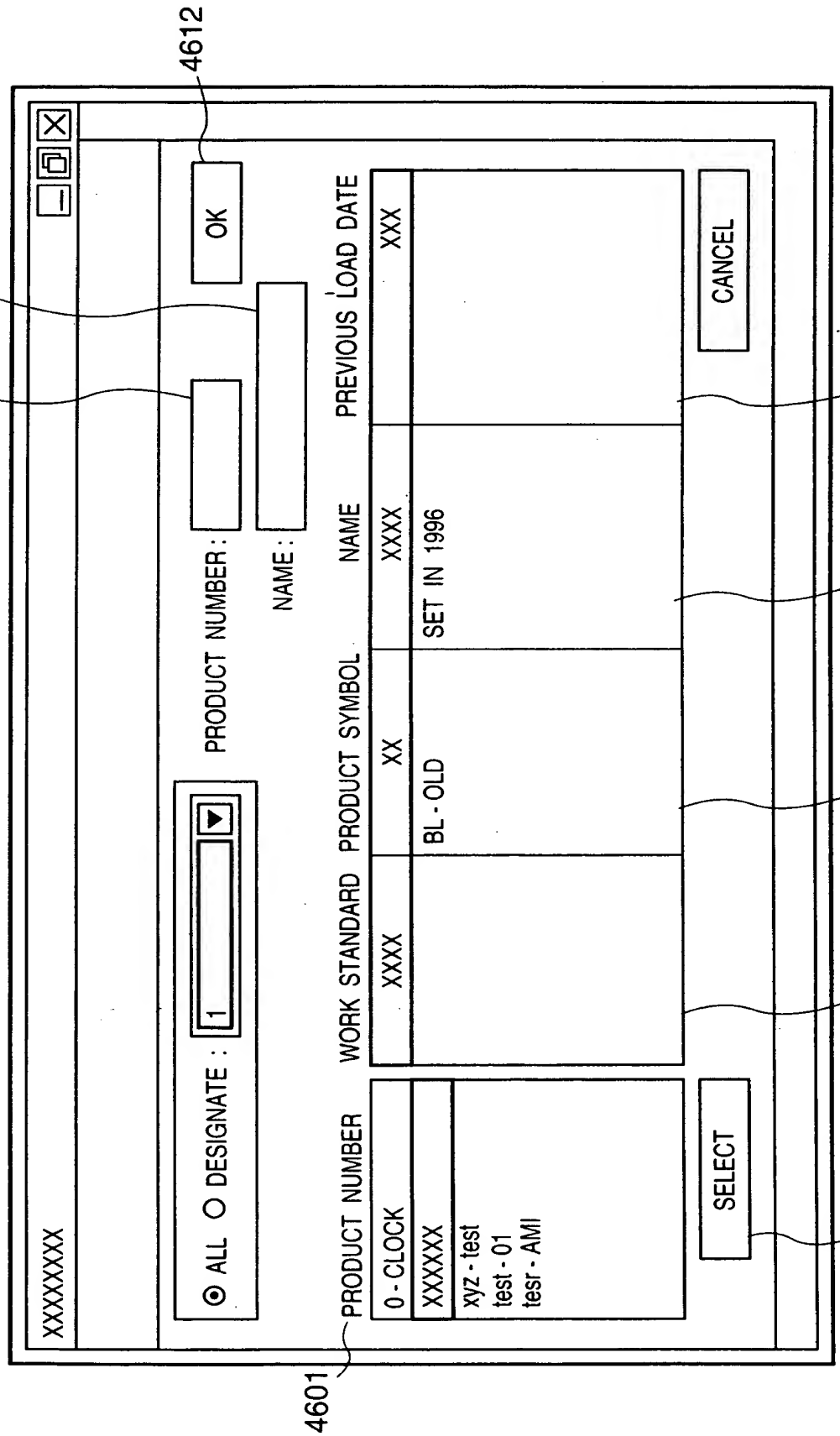

4612
4610
4609
4605
4604
4603
4602
4611
4601
XXXXXXX
OK
ALL
DESIGNATE :
1
PRODUCT NUMBER :
NAME :
PRODUCT NUMBER
WORK STANDARD
PRODUCT SYMBOL
NAME
PREVIOUS LOAD DATE
0 - CLOCK
XXXXXX
XXXX
XX
XXXX
XXX
BL - OLD
SET IN 1996
xyz - test
test - 01
tesr - AMI
CANCEL
SELECT

FIG. 47

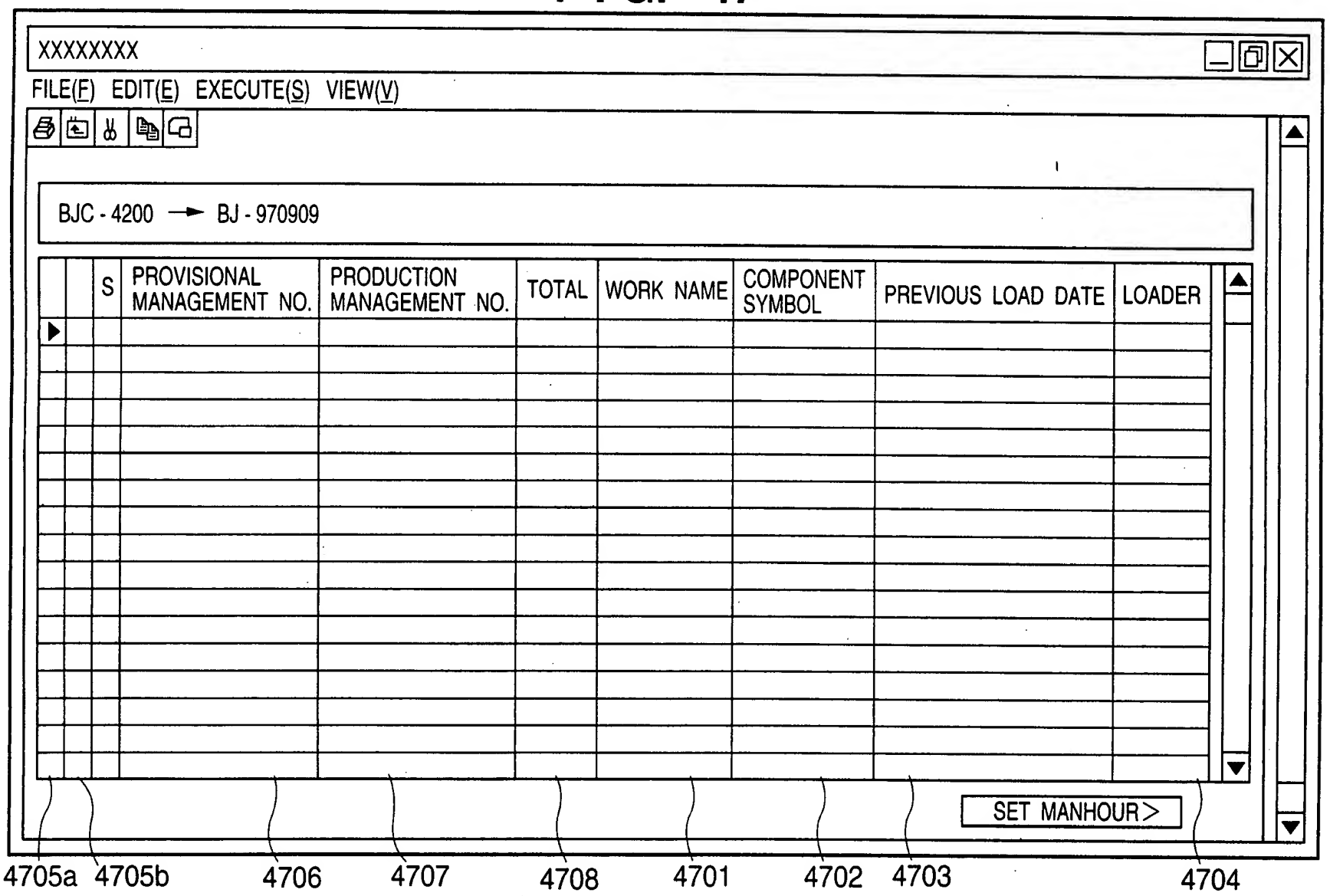

XXXXXXXX
FILE(F) EDIT(E) EXECUTE(S) VIEW(V)
BJC - 4200 → BJ - 970909
S
PROVISIONAL MANAGEMENT NO.
PRODUCTION MANAGEMENT NO.
TOTAL
WORK NAME
COMPONENT SYMBOL
PREVIOUS LOAD DATE
LOADER
SET MANHOUR>
4705a
4705b
4706
4707
4708
4701
4702
4703
4704

FIG. 48

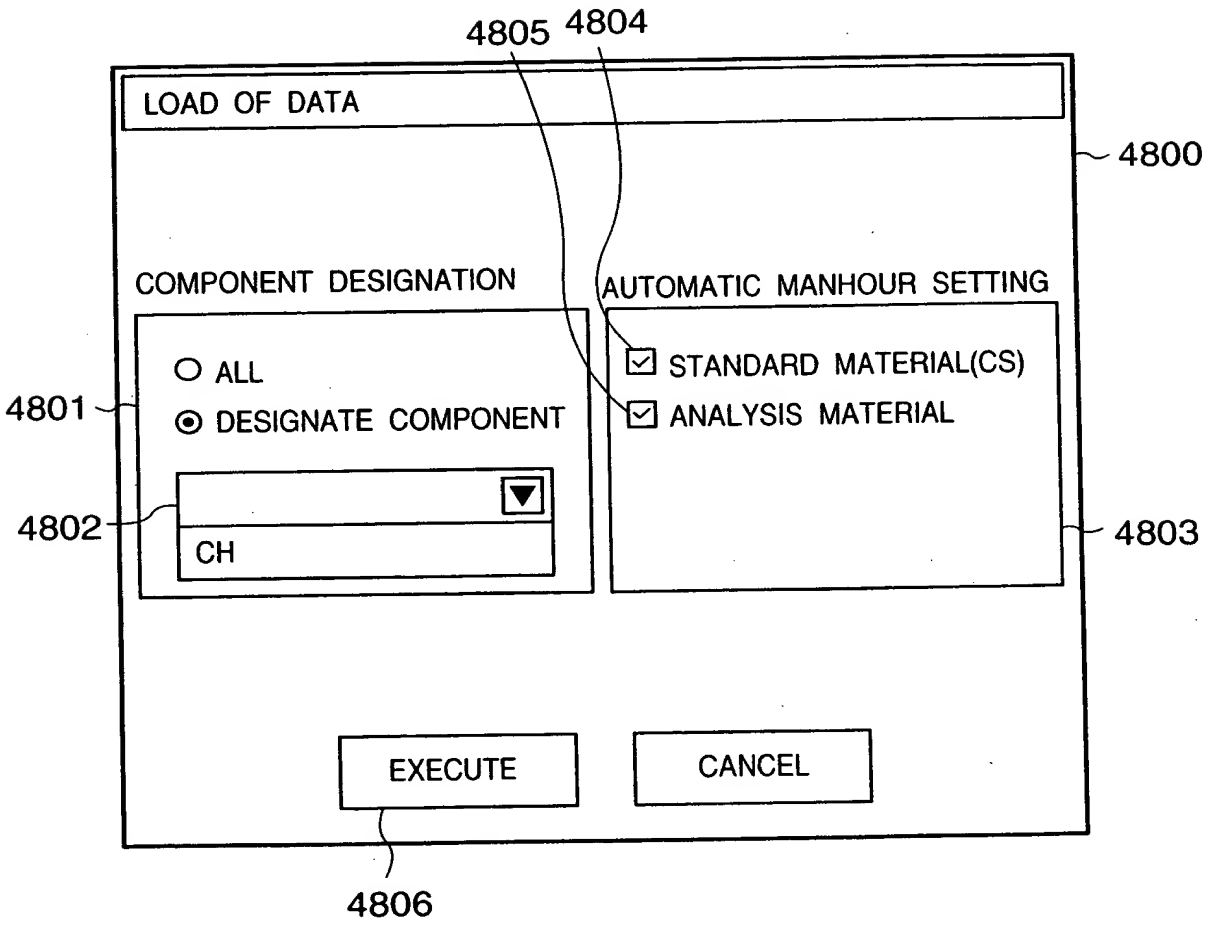

4805
4804
LOAD OF DATA
4800
COMPONENT DESIGNATION
AUTOMATIC MANHOUR SETTING
ALL
DESIGNATE COMPONENT
STANDARD MATERIAL(CS)
ANALYSIS MATERIAL
4801
4802
CH
4803
EXECUTE
CANCEL
4806

FIG. 49

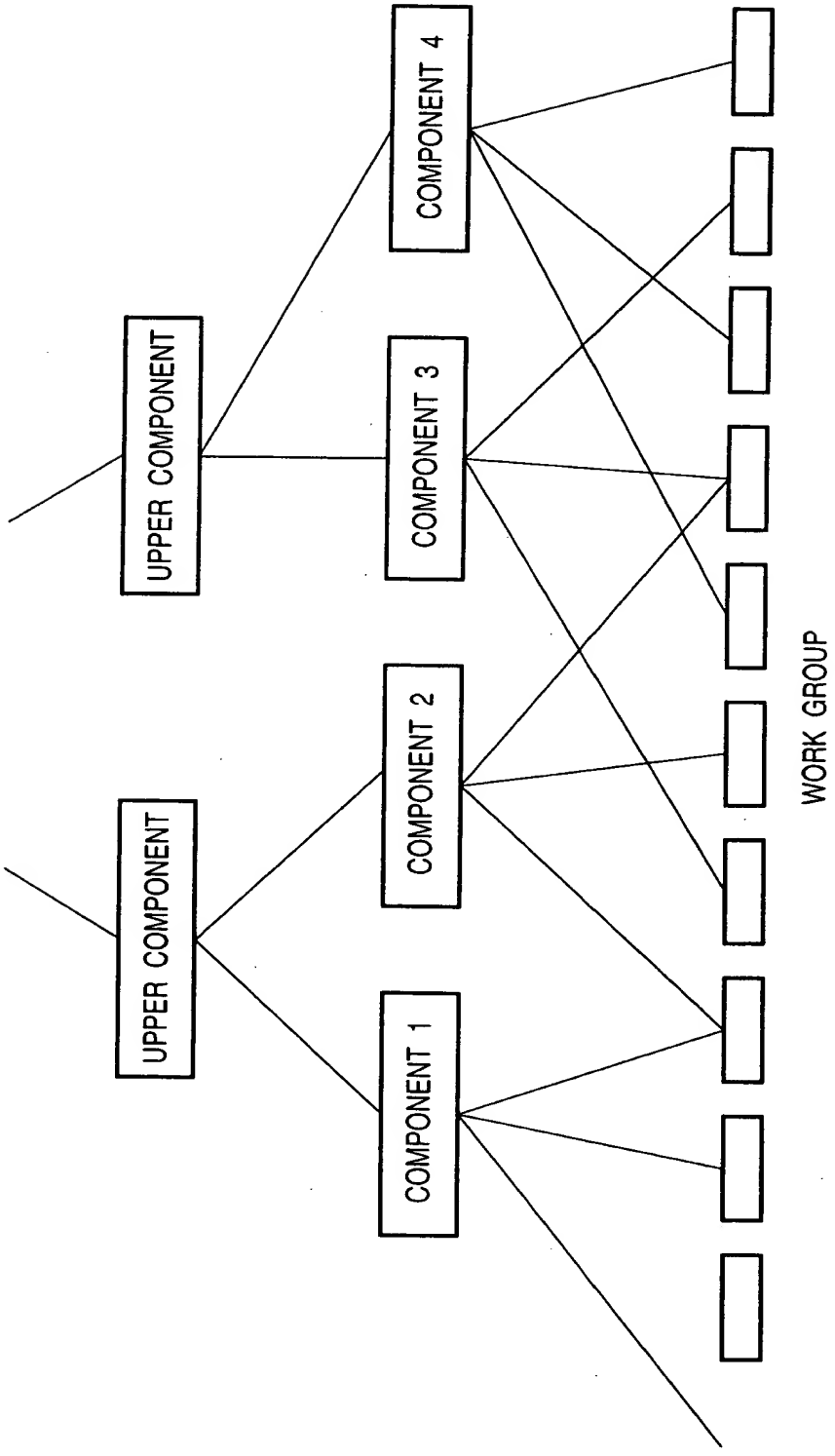

UPPER COMPONENT
UPPER COMPONENT
COMPONENT 1
COMPONENT 2
COMPONENT 3
COMPONENT 4
WORK GROUP

FIG. 50

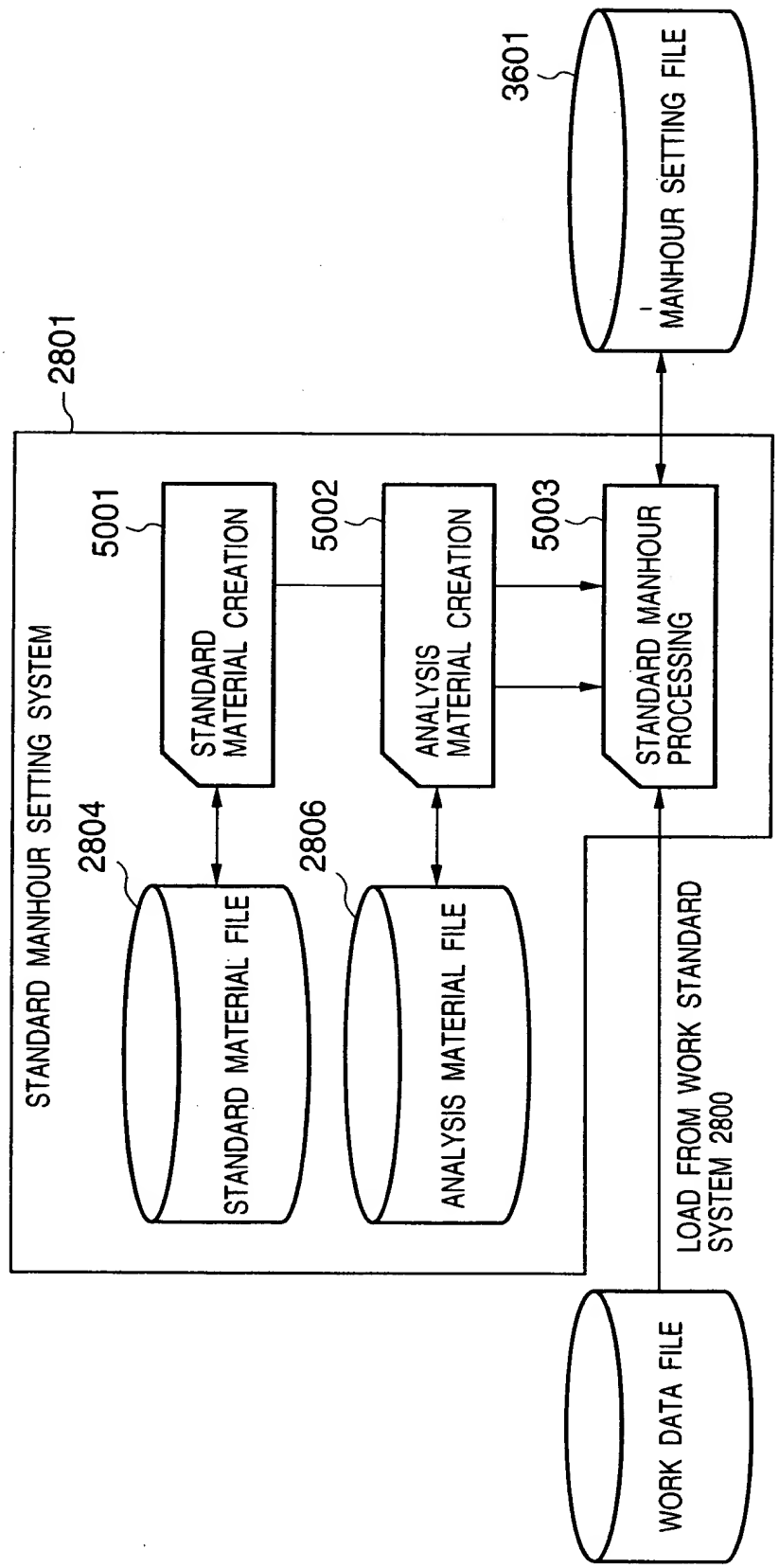

3601
MANHOUR SETTING FILE
2801
STANDARD MANHOUR SETTING SYSTEM
5001
STANDARD MATERIAL CREATION
5002
ANALYSIS MATERIAL CREATION
5003
STANDARD MANHOUR PROCESSING
2804
STANDARD MATERIAL FILE
2806
ANALYSIS MATERIAL FILE
LOAD FROM WORK STANDARD SYSTEM 2800
WORK DATA FILE

FIG. 51

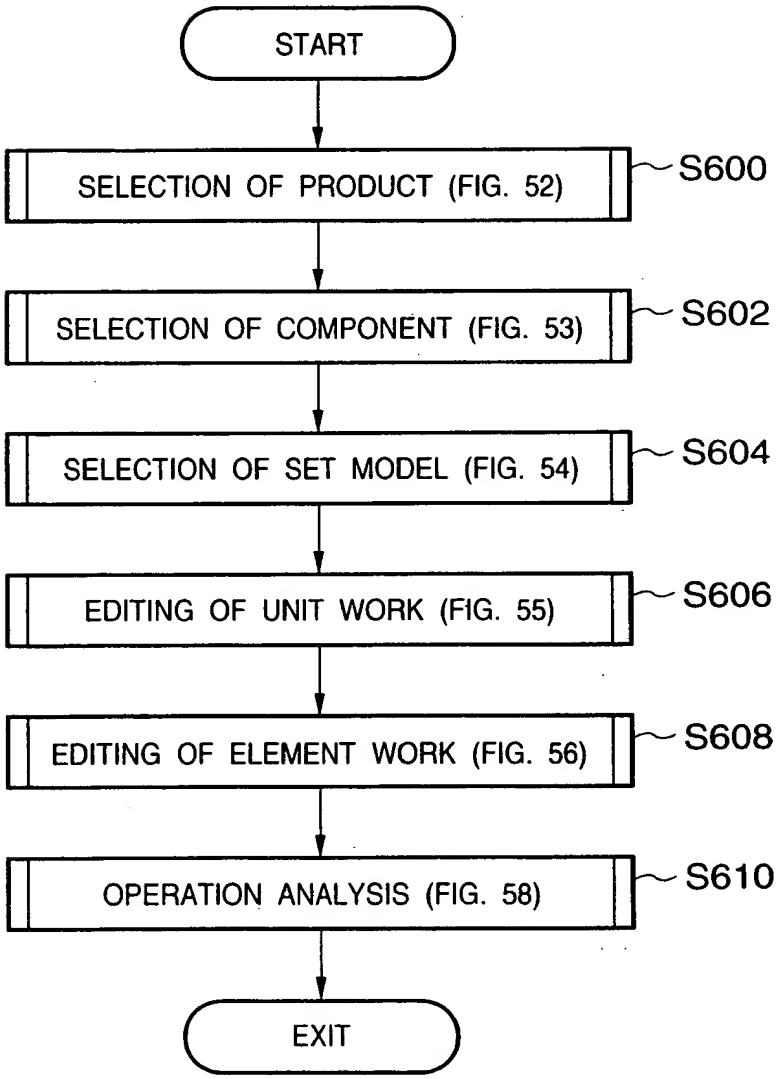

START
SELECTION OF PRODUCT (FIG. 52)
S600
SELECTION OF COMPONENT (FIG. 53)
S602
SELECTION OF SET MODEL (FIG. 54)
S604
EDITING OF UNIT WORK (FIG. 55)
S606
EDITING OF ELEMENT WORK (FIG. 56)
S608
OPERATION ANALYSIS (FIG. 58)
S610
EXIT

FIG. 52

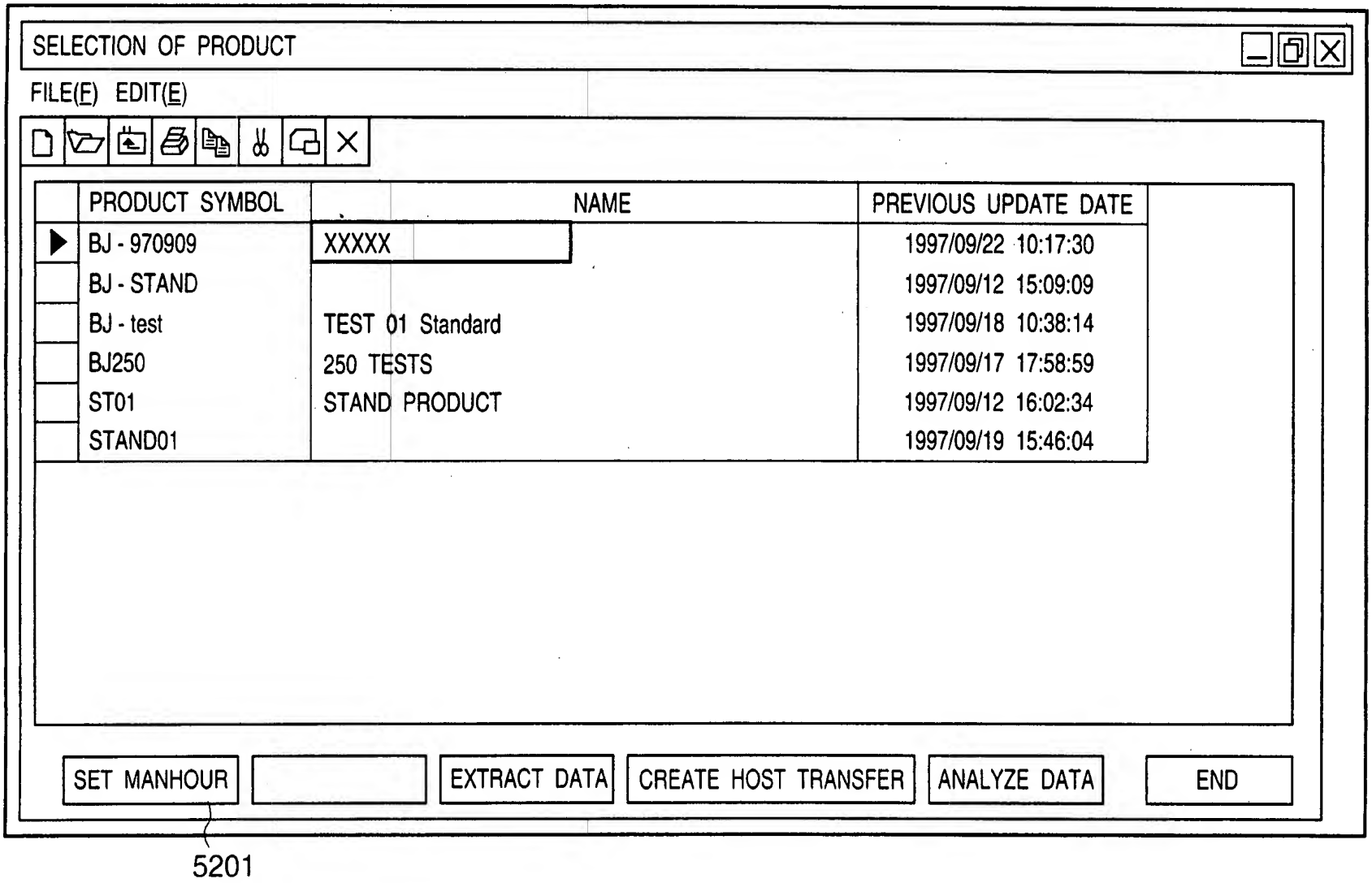

SELECTION OF PRODUCT
FILE(F) EDIT(E)
PRODUCT SYMBOL
NAME
PREVIOUS UPDATE DATE
BJ - 970909
XXXXX
1997/09/22 10:17:30
BJ - STAND
1997/09/12 15:09:09
BJ - test
TEST 01 Standard
1997/09/18 10:38:14
BJ250
250 TESTS
1997/09/17 17:58:59
ST01
STAND PRODUCT
1997/09/12 16:02:34
STAND01
1997/09/19 15:46:04
SET MANHOUR
EXTRACT DATA
CREATE HOST TRANSFER
ANALYZE DATA
END
5201

FIG. 53

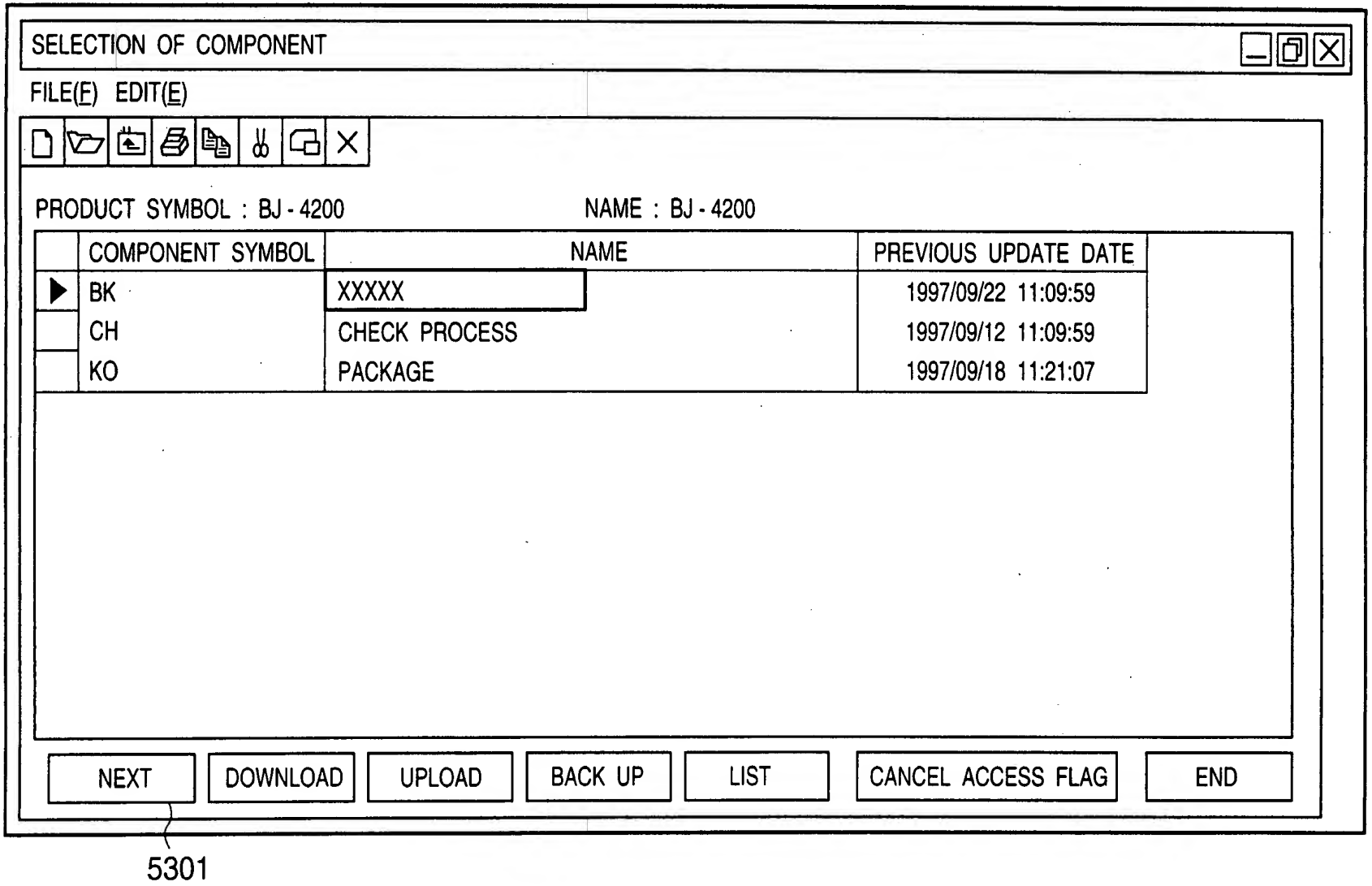

SELECTION OF COMPONENT
FILE(F) EDIT(E)
PRODUCT SYMBOL : BJ - 4200
NAME : BJ - 4200
COMPONENT SYMBOL
NAME
PREVIOUS UPDATE DATE
BK
XXXXX
1997/09/22 11:09:59
CH
CHECK PROCESS
1997/09/12 11:09:59
KO
PACKAGE
1997/09/18 11:21:07
NEXT
DOWNLOAD
UPLOAD
BACK UP
LIST
CANCEL ACCESS FLAG
END
5301

FIG. 54

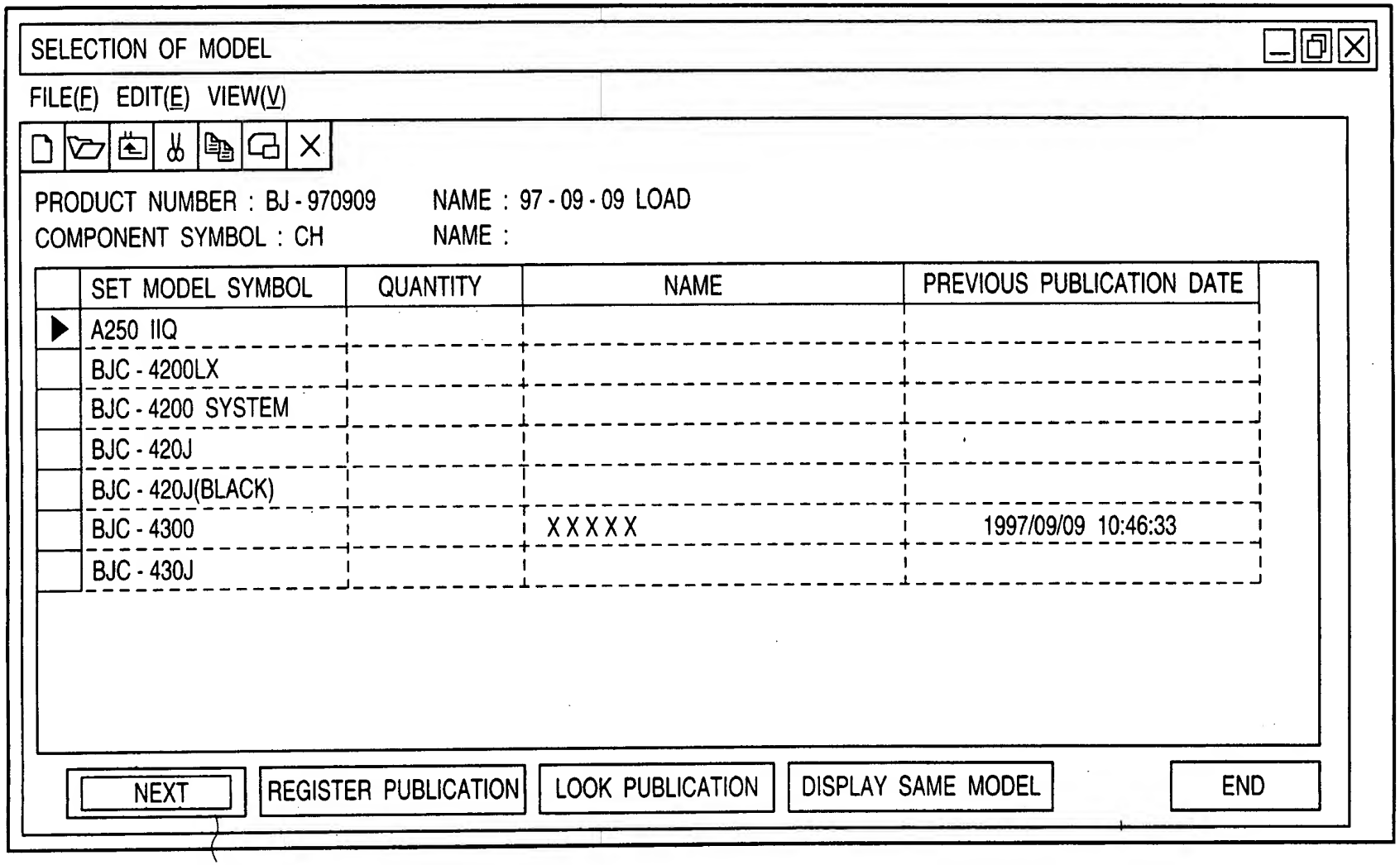

SELECTION OF MODEL
FILE(F) EDIT(E) VIEW(V)
PRODUCT NUMBER : BJ-970909
NAME : 97-09-09 LOAD
COMPONENT SYMBOL : CH
NAME :
SET MODEL SYMBOL
QUANTITY
NAME
PREVIOUS PUBLICATION DATE
A250 IIQ
BJC-4200LX
BJC-4200 SYSTEM
BJC-420J
BJC-420J(BLACK)
BJC-4300
XXXXX
1997/09/09 10:46:33
BJC-430J
NEXT
REGISTER PUBLICATION
LOOK PUBLICATION
DISPLAY SAME MODEL
END
5401

FIG. 55

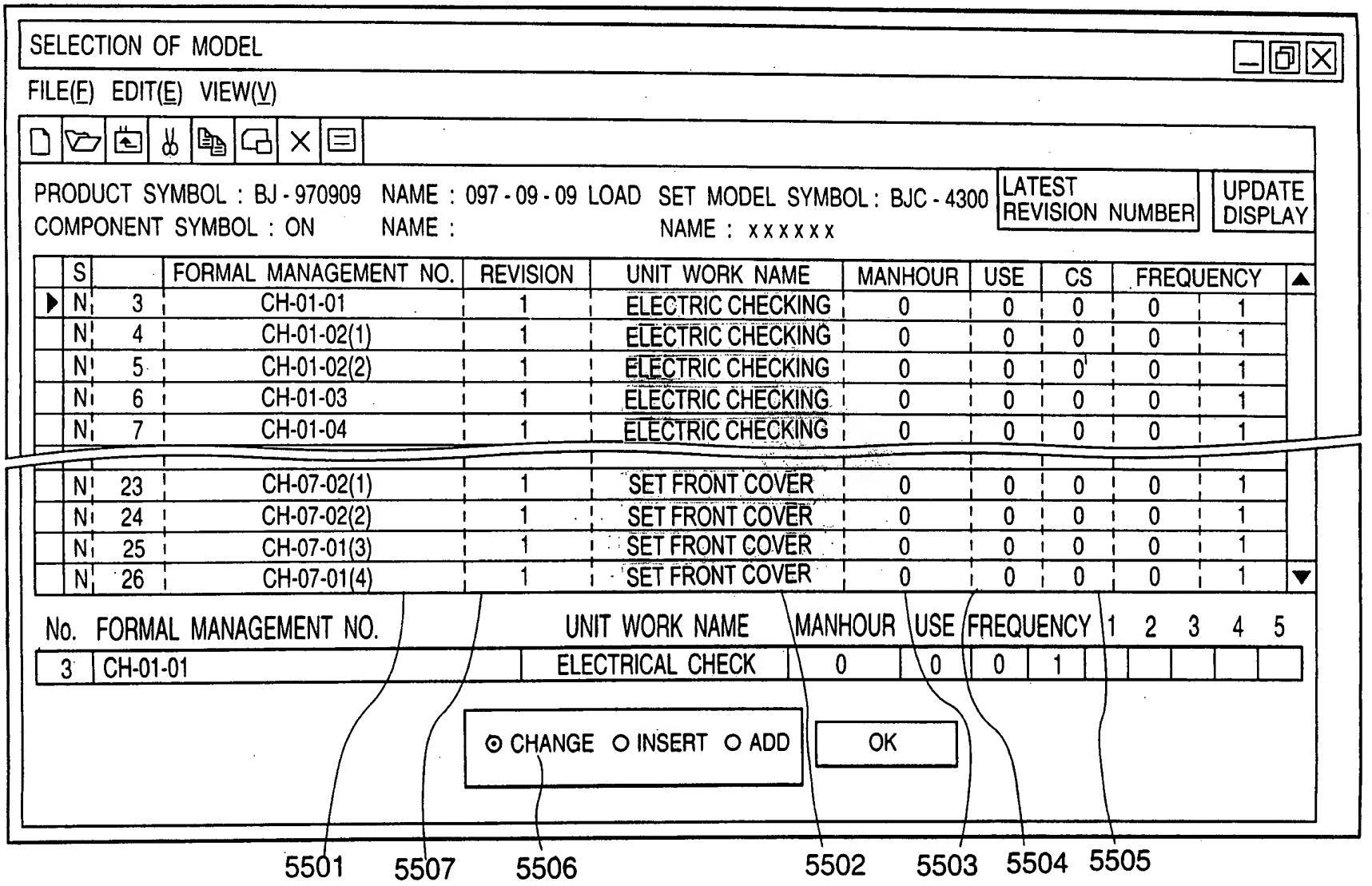

SELECTION OF MODEL
FILE(F) EDIT(E) VIEW(V)
PRODUCT SYMBOL : BJ - 970909 NAME : 097 - 09 - 09 LOAD SET MODEL SYMBOL : BJC - 4300
COMPONENT SYMBOL : ON NAME : NAME : xxxxxx
LATEST REVISION NUMBER
UPDATE DISPLAY
S | FORMAL MANAGEMENT NO. | REVISION | UNIT WORK NAME | MANHOUR | USE | CS | FREQUENCY
N 3 CH-01-01 1 ELECTRIC CHECKING 0 0 0 0 1
N 4 CH-01-02(1) 1 ELECTRIC CHECKING 0 0 0 0 1
N 5 CH-01-02(2) 1 ELECTRIC CHECKING 0 0 0 0 1
N 6 CH-01-03 1 ELECTRIC CHECKING 0 0 0 0 1
N 7 CH-01-04 1 ELECTRIC CHECKING 0 0 0 0 1
N 23 CH-07-02(1) 1 SET FRONT COVER 0 0 0 0 1
N 24 CH-07-02(2) 1 SET FRONT COVER 0 0 0 0 1
N 25 CH-07-01(3) 1 SET FRONT COVER 0 0 0 0 1
N 26 CH-07-01(4) 1 SET FRONT COVER 0 0 0 0 1
No. FORMAL MANAGEMENT NO. UNIT WORK NAME MANHOUR USE FREQUENCY 1 2 3 4 5
3 CH-01-01 ELECTRICAL CHECK 0 0 0 1
CHANGE INSERT ADD
OK
5501
5507
5506
5502
5503
5504
5505

FIG. 56

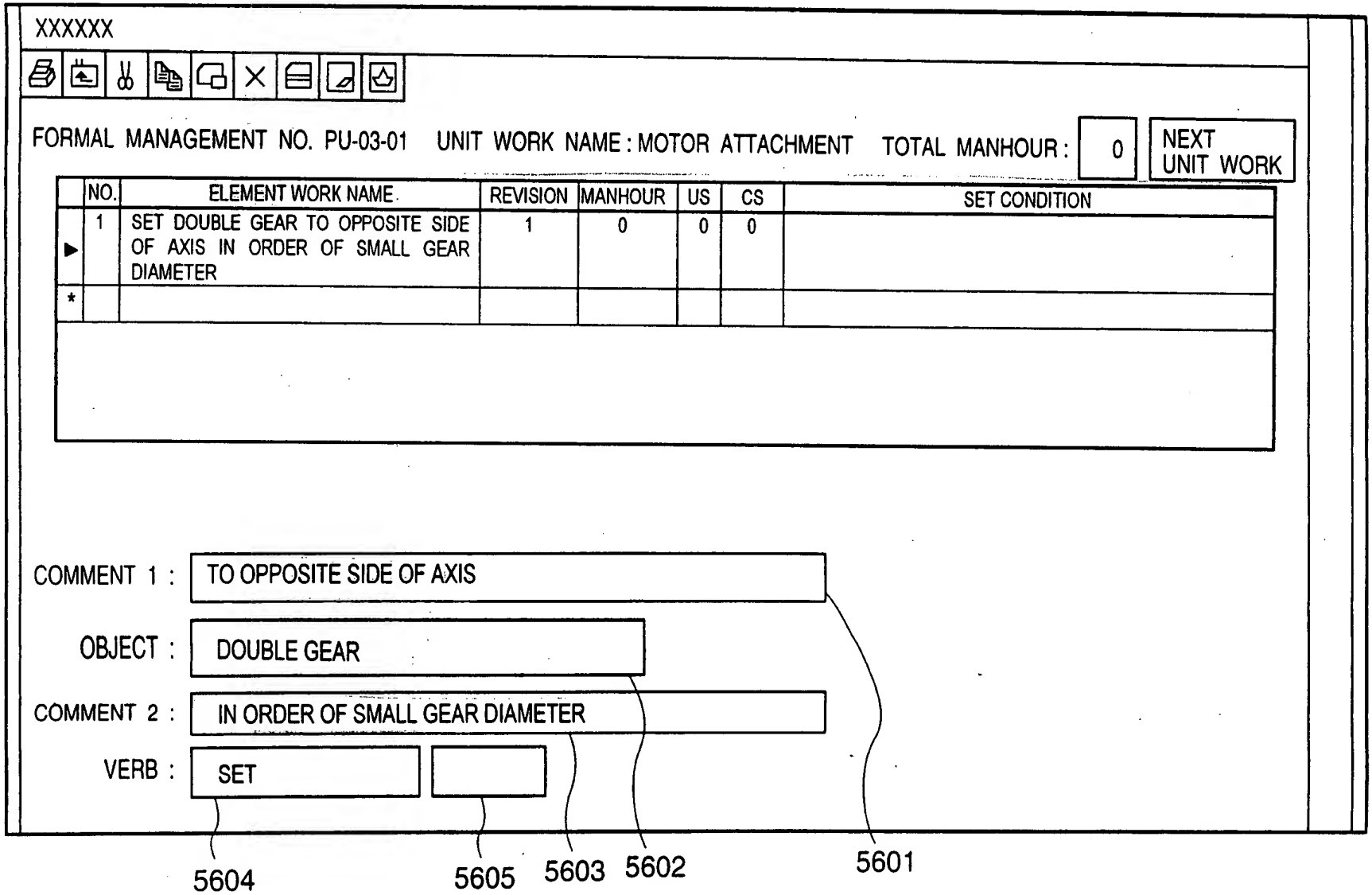
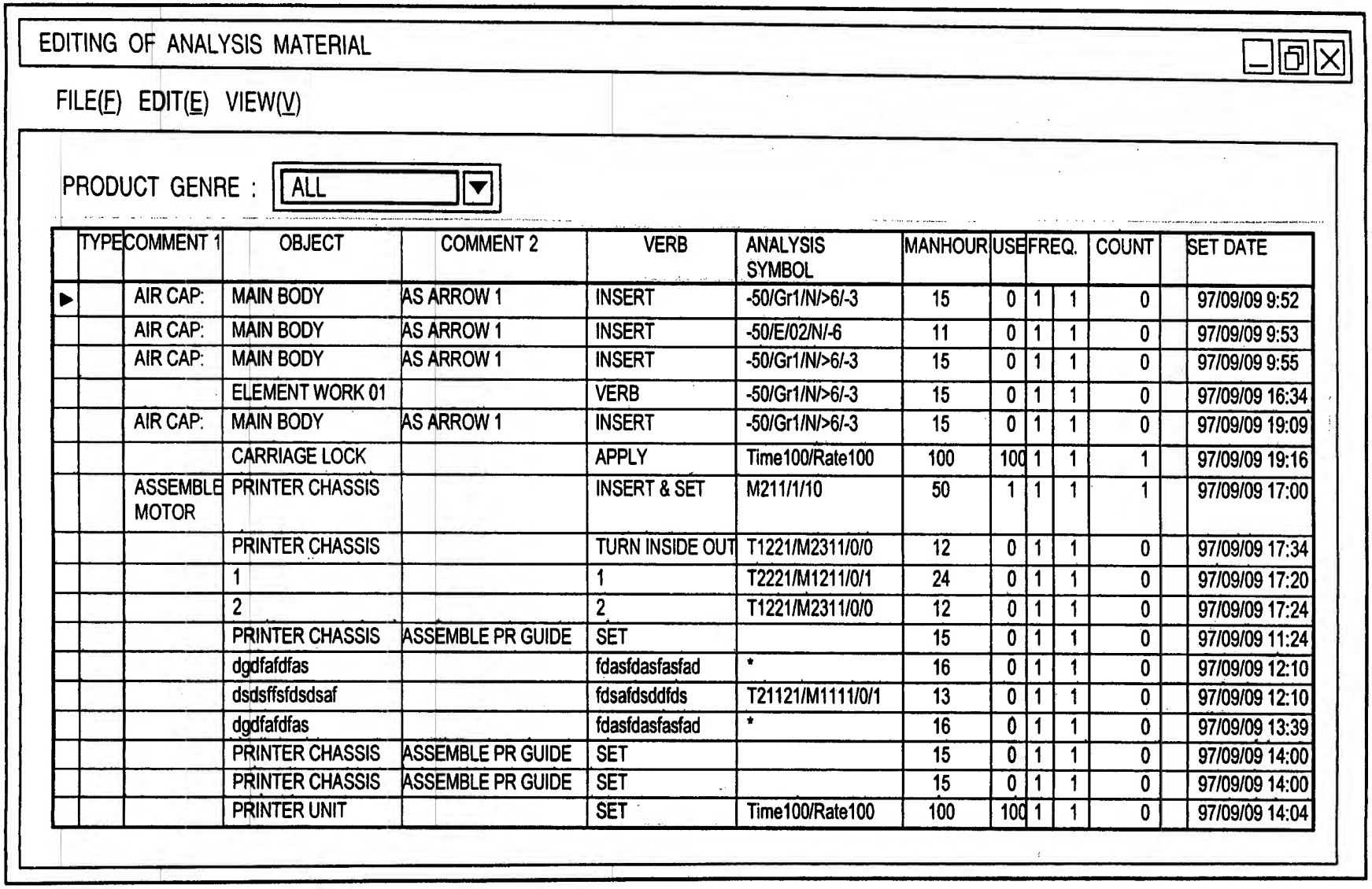

XXXXXX
FORMAL MANAGEMENT NO. PU-03-01
UNIT WORK NAME : MOTOR ATTACHMENT
TOTAL MANHOUR :
0
NEXT UNIT WORK
NO.
ELEMENT WORK NAME
REVISION
MANHOUR
US
CS
SET CONDITION
1
SET DOUBLE GEAR TO OPPOSITE SIDE OF AXIS IN ORDER OF SMALL GEAR DIAMETER
1
0
0
0
COMMENT 1 :
TO OPPOSITE SIDE OF AXIS
OBJECT :
DOUBLE GEAR
COMMENT 2 :
IN ORDER OF SMALL GEAR DIAMETER
VERB :
SET
5604
5605
5603
5602
5601

FIG. 57



	TYPE	COMMENT 1	OBJECT	COMMENT 2	VERB	ANALYSIS SYMBOL	MANHOUR	USE	FREQ.		COUNT		SET DATE
▶		AIR CAP:	MAIN BODY	AS ARROW 1	INSERT	-50/Gr1/N/>6/-3	15	0	1	1	0		97/09/09 9:52
		AIR CAP:	MAIN BODY	AS ARROW 1	INSERT	-50/E/02/N/-6	11	0	1	1	0		97/09/09 9:53
		AIR CAP:	MAIN BODY	AS ARROW 1	INSERT	-50/Gr1/N/>6/-3	15	0	1	1	0		97/09/09 9:55
			ELEMENT WORK 01		VERB	-50/Gr1/N/>6/-3	15	0	1	1	0		97/09/09 16:34
		AIR CAP:	MAIN BODY	AS ARROW 1	INSERT	-50/Gr1/N/>6/-3	15	0	1	1	0		97/09/09 19:09
			CARRIAGE LOCK		APPLY	Time100/Rate100	100	100	1	1	1		97/09/09 19:16
		ASSEMBLE MOTOR	PRINTER CHASSIS		INSERT & SET	M211/1/10	50	1	1	1	1		97/09/09 17:00
			PRINTER CHASSIS		TURN INSIDE OUT	T1221/M2311/0/0	12	0	1	1	0		97/09/09 17:34
			1		1	T2221/M1211/0/1	24	0	1	1	0		97/09/09 17:20
			2		2	T1221/M2311/0/0	12	0	1	1	0		97/09/09 17:24
			PRINTER CHASSIS	ASSEMBLE PR GUIDE	SET		15	0	1	1	0		97/09/09 11:24
			dgdfafdfas		fdasfdasfasfad	*	16	0	1	1	0		97/09/09 12:10
			dsdsffsfdsdsaf		fdsafdsddfds	T21121/M1111/0/1	13	0	1	1	0		97/09/09 12:10
			dgdfafdfas		fdasfdasfasfad	*	16	0	1	1	0		97/09/09 13:39
			PRINTER CHASSIS	ASSEMBLE PR GUIDE	SET		15	0	1	1	0		97/09/09 14:00
			PRINTER CHASSIS	ASSEMBLE PR GUIDE	SET		15	0	1	1	0		97/09/09 14:00
			PRINTER UNIT		SET	Time100/Rate100	100	100	1	1	0		97/09/09 14:04

FIG. 58

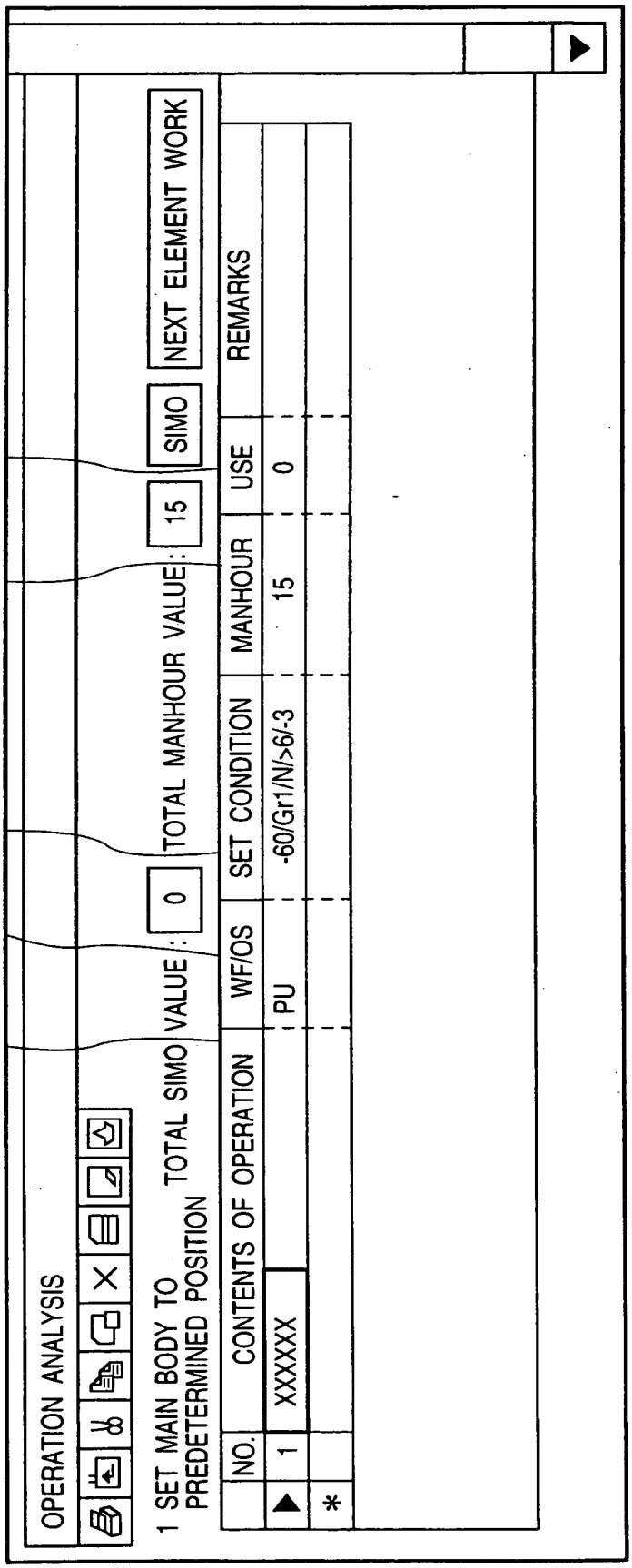

OPERATION ANALYSIS
1 SET MAIN BODY TO PREDETERMINED POSITION
TOTAL SIMO VALUE: 0
TOTAL MANHOUR VALUE: 15
SIMO
NEXT ELEMENT WORK
NO.
CONTENTS OF OPERATION
WF/OS
SET CONDITION
MANHOUR
USE
REMARKS
1
XXXXXX
PU
-60/Gr1/N/>6/-3
15
0
5801
5802
5803
5804
5805

FIG. 59

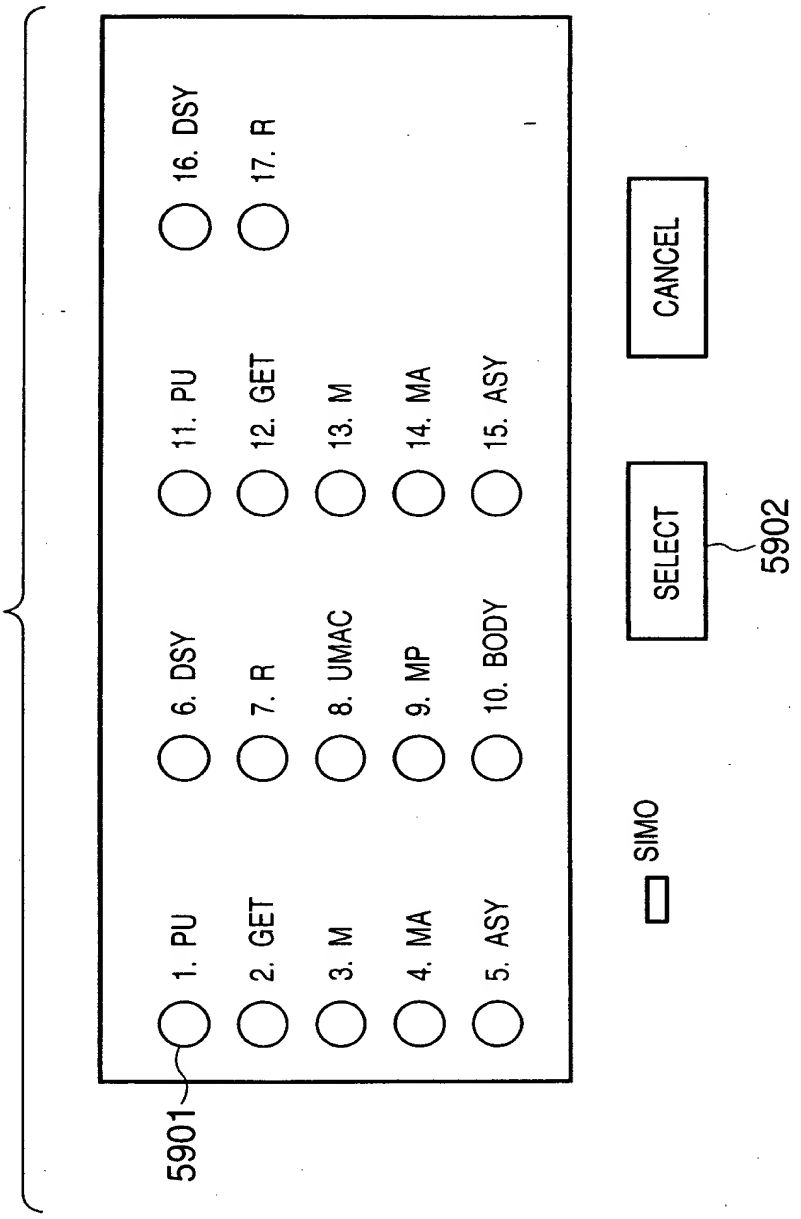

1. PU
2. GET
3. M
4. MA
5. ASY
6. DSY
7. R
8. UMAC
9. MP
10. BODY
11. PU
12. GET
13. M
14. MA
15. ASY
16. DSY
17. R
5901
SIMO
SELECT
CANCEL
5902

FIG. 60

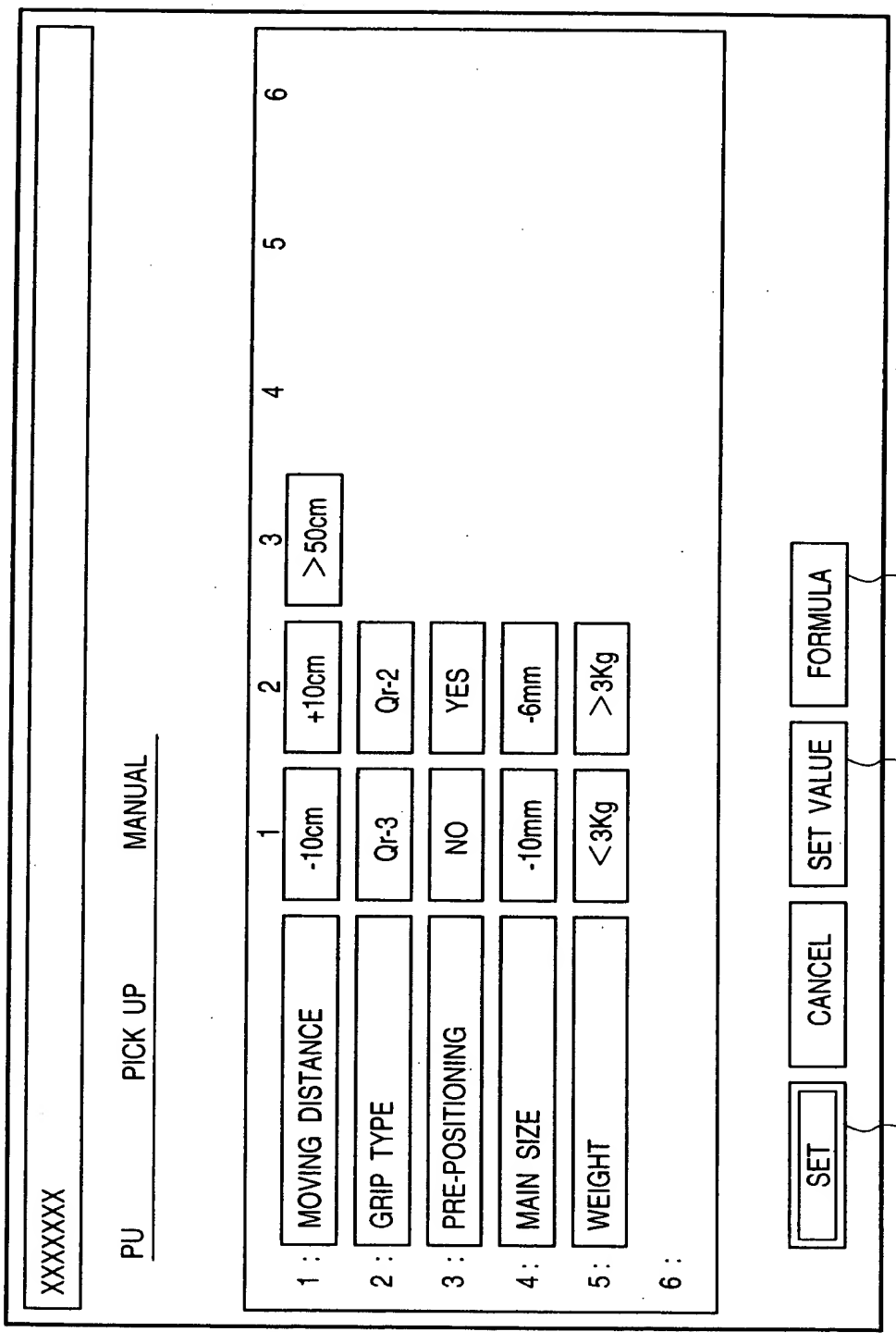

XXXXXXX
PU
PICK UP
MANUAL
1
2
3
4
5
6
1 : MOVING DISTANCE
-10cm
+10cm
>50cm
2 : GRIP TYPE
Qr-3
Qr-2
3 : PRE-POSITIONING
NO
YES
4 : MAIN SIZE
-10mm
-6mm
5 : WEIGHT
<3Kg
>3Kg
6 :
SET
CANCEL
SET VALUE
FORMULA
6001
6002
6003

FIG. 61

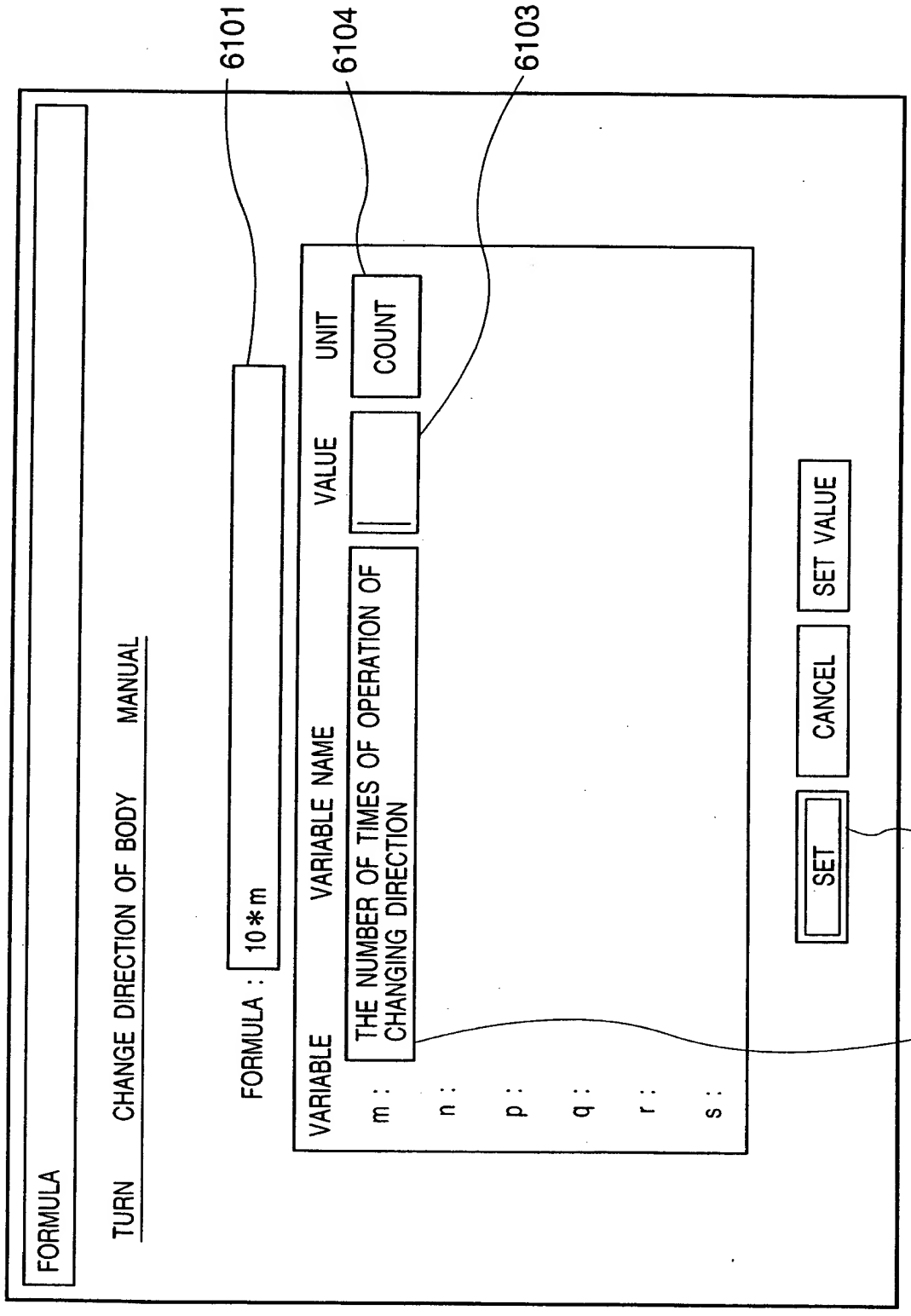

FORMULA
TURN
CHANGE DIRECTION OF BODY
MANUAL
FORMULA :
10 * m
VARIABLE
VARIABLE NAME
VALUE
UNIT
m :
THE NUMBER OF TIMES OF OPERATION OF CHANGING DIRECTION
COUNT
n :
p :
q :
r :
s :
SET
CANCEL
SET VALUE
6101
6104
6103
6102
6105

FIG. 62

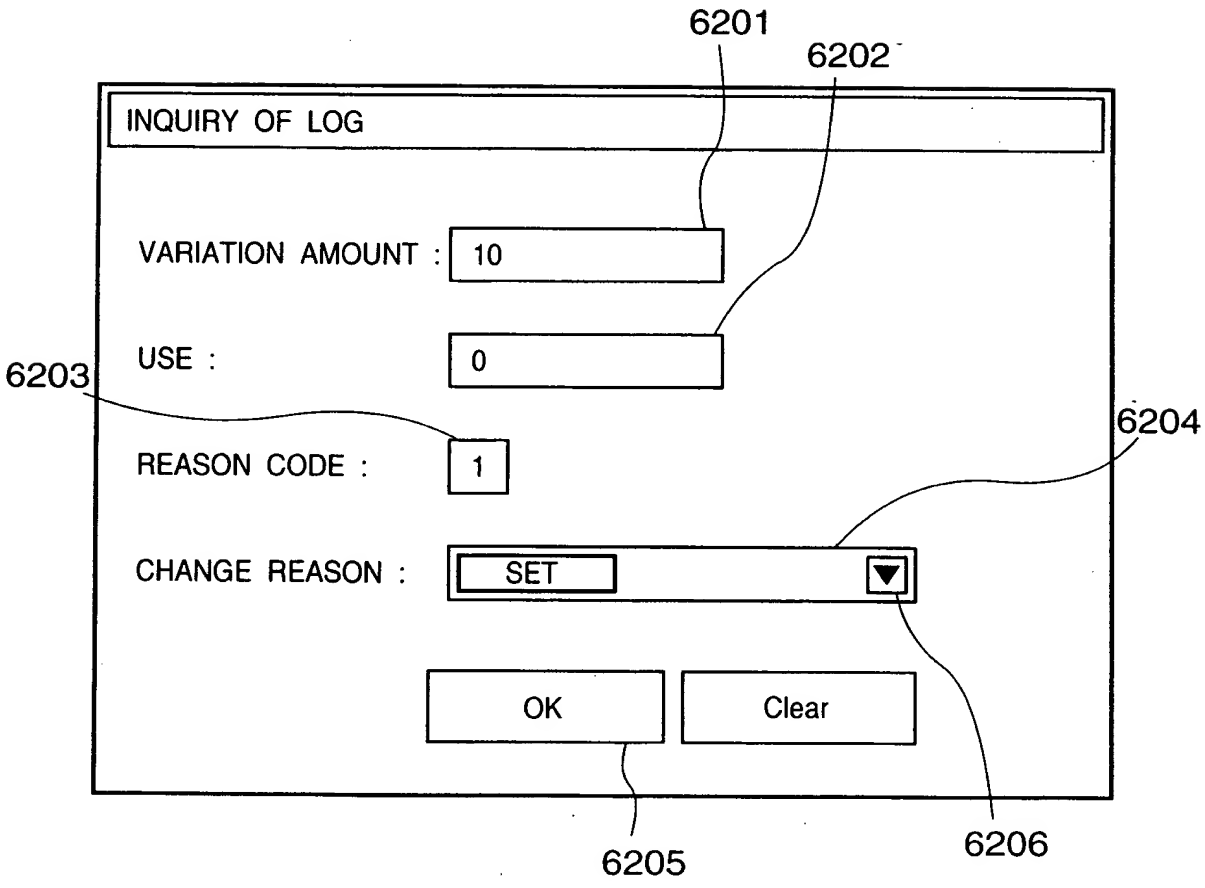

6201
6202
INQUIRY OF LOG
VARIATION AMOUNT :
10
USE :
0
6203
6204
REASON CODE :
1
CHANGE REASON :
SET
OK
Clear
6205
6206

FIG. 63

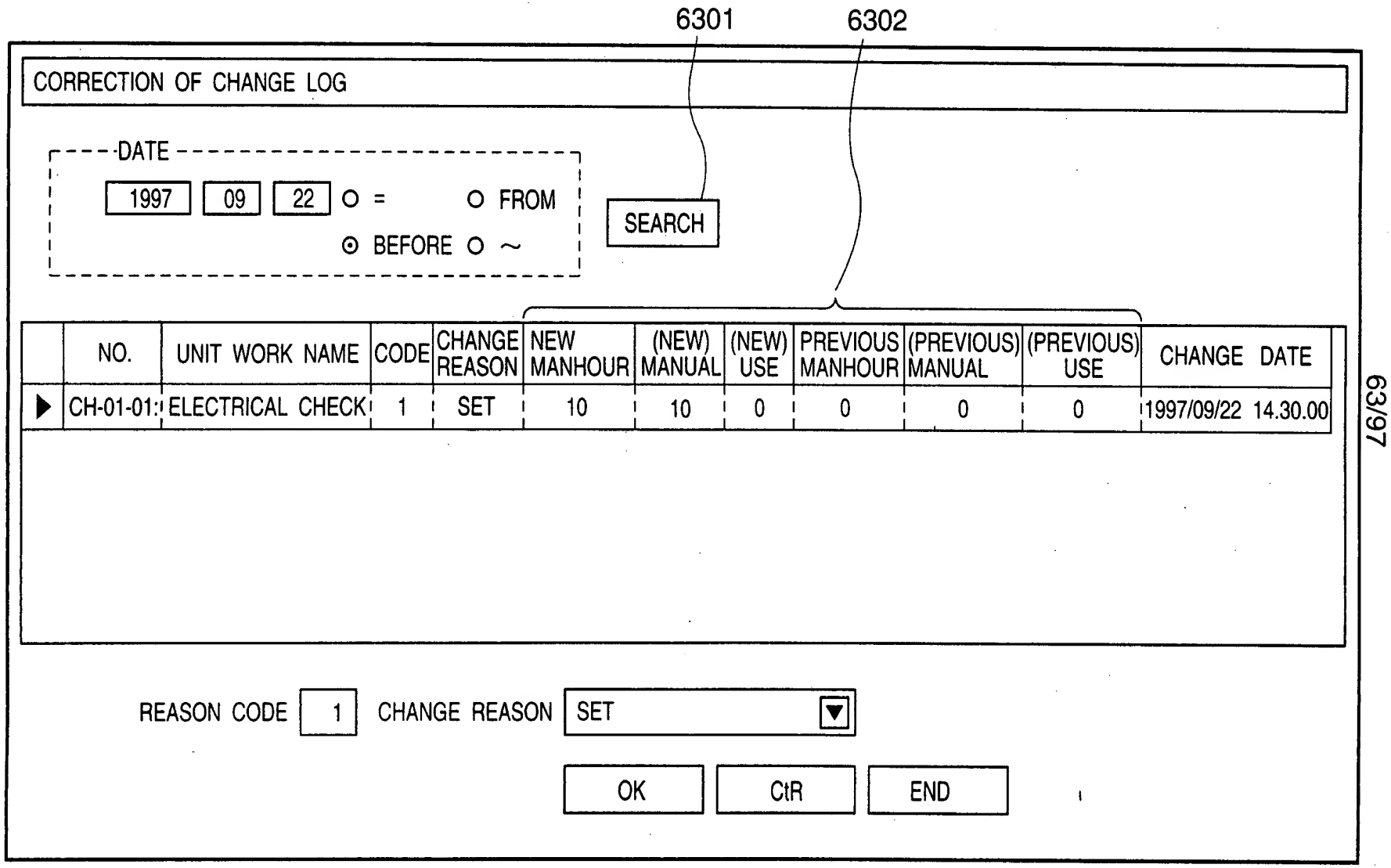

6301
6302
CORRECTION OF CHANGE LOG
DATE
1997
09
22
O =
O FROM
⊙ BEFORE
O ~
SEARCH
NO.
UNIT WORK NAME
CODE
CHANGE REASON
NEW MANHOUR
(NEW) MANUAL
(NEW) USE
PREVIOUS MANHOUR
(PREVIOUS) MANUAL
(PREVIOUS) USE
CHANGE DATE
CH-01-01:
ELECTRICAL CHECK
1
SET
10
10
0
0
0
0
1997/09/22 14.30.00
REASON CODE
1
CHANGE REASON
SET
OK
CtR
END

FIG. 64

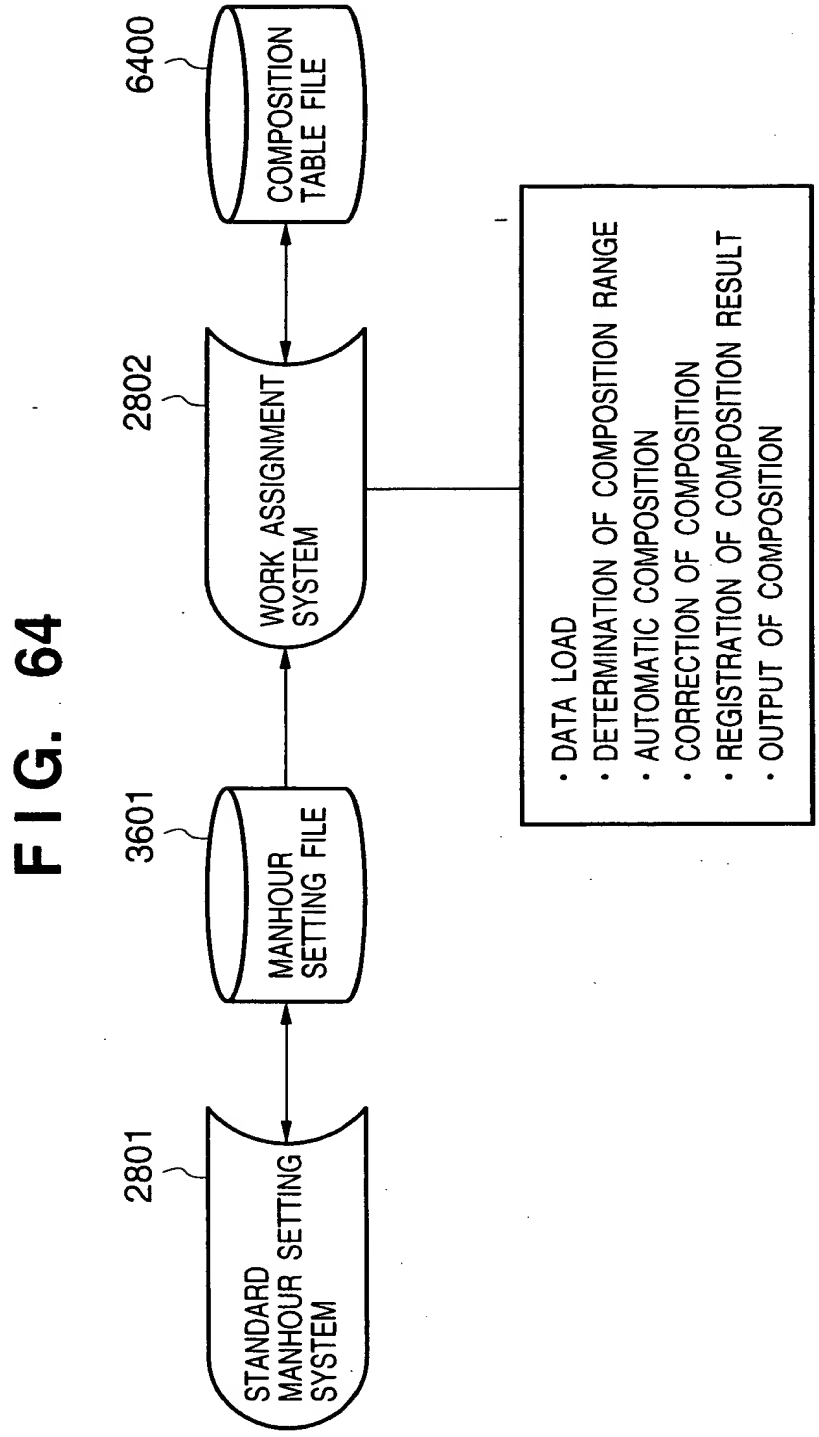

6400
COMPOSITION TABLE FILE
2802
WORK ASSIGNMENT SYSTEM
3601
MANHOUR SETTING FILE
2801
STANDARD MANHOUR SETTING SYSTEM
• DATA LOAD
• DETERMINATION OF COMPOSITION RANGE
• AUTOMATIC COMPOSITION
• CORRECTION OF COMPOSITION
• REGISTRATION OF COMPOSITION RESULT
• OUTPUT OF COMPOSITION

FIG. 65

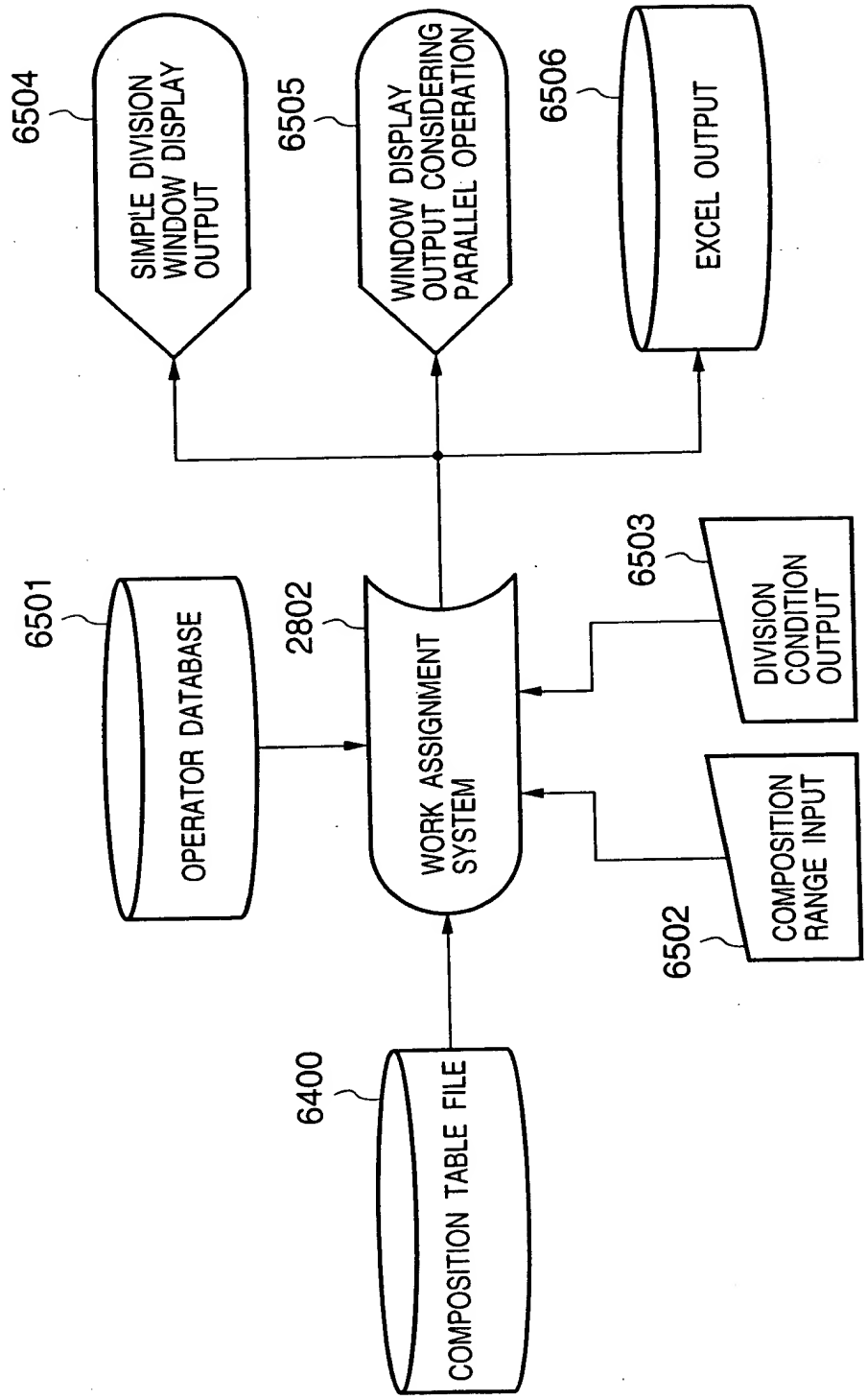

6504
SIMPLE DIVISION WINDOW DISPLAY OUTPUT
6505
WINDOW DISPLAY OUTPUT CONSIDERING PARALLEL OPERATION
6506
EXCEL OUTPUT
6501
OPERATOR DATABASE
2802
WORK ASSIGNMENT SYSTEM
6503
DIVISION CONDITION OUTPUT
6502
COMPOSITION RANGE INPUT
6400
COMPOSITION TABLE FILE

FIG. 66

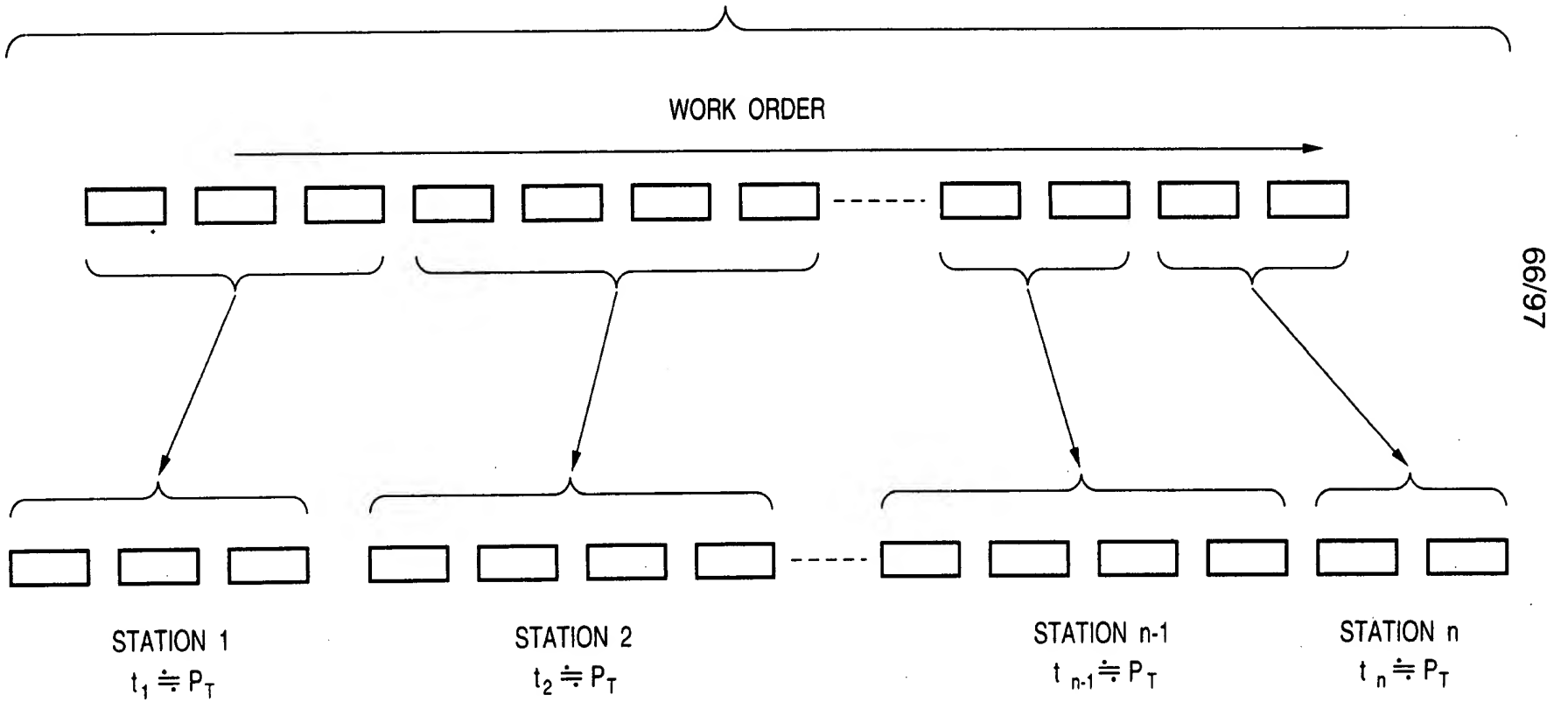

WORK ORDER
STATION 1
$t_1 \fallingdotseq P_T$
STATION 2
$t_2 \fallingdotseq P_T$
STATION n-1
$t_{n-1} \fallingdotseq P_T$
STATION n
$t_n \fallingdotseq P_T$

FIG. 67

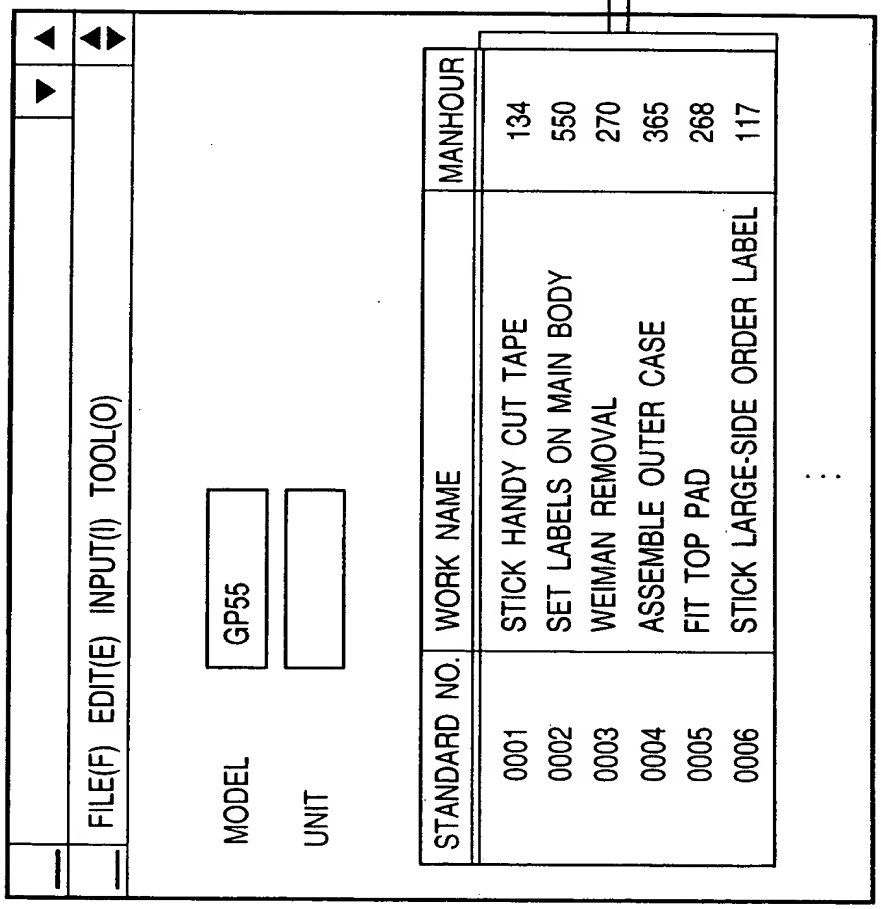

FILE(F) EDIT(E) INPUT(I) TOOL(O)
MODEL
GP55
UNIT
STANDARD NO.
WORK NAME
MANHOUR
0001
STICK HANDY CUT TAPE
134
0002
SET LABELS ON MAIN BODY
550
0003
WEIMAN REMOVAL
270
0004
ASSEMBLE OUTER CASE
365
0005
FIT TOP PAD
268
0006
STICK LARGE-SIDE ORDER LABEL
117
SIMPLE DIVISION
PARALLEL DIVISION

FIG. 68

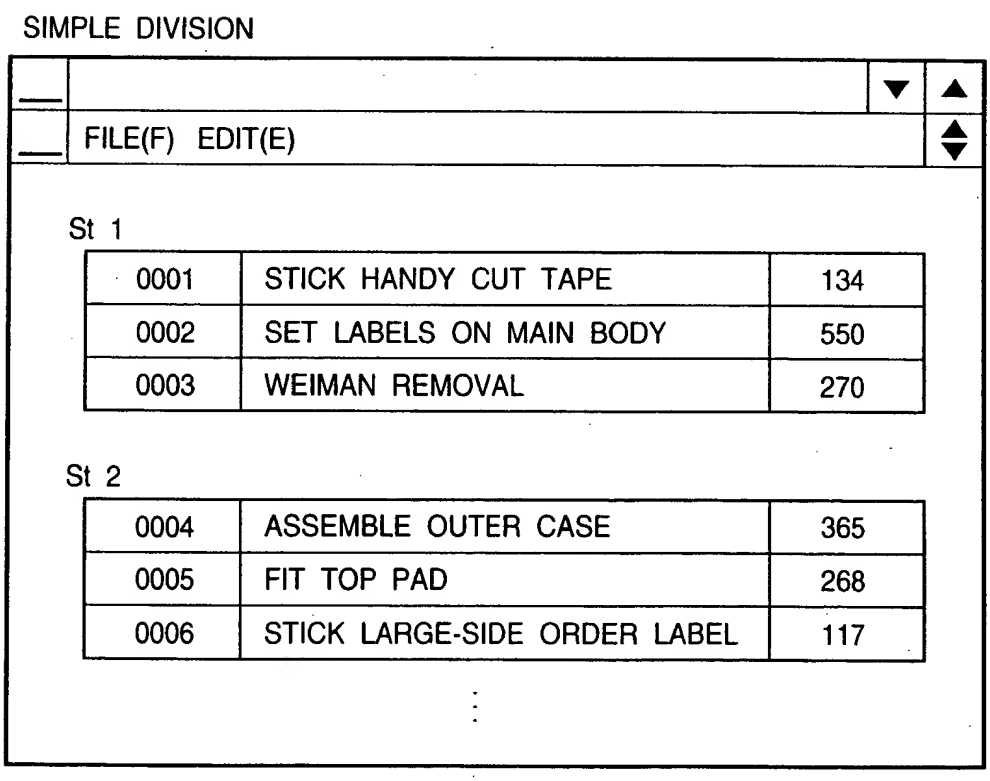

SIMPLE DIVISION
FILE(F) EDIT(E)
St 1
0001 STICK HANDY CUT TAPE 134
0002 SET LABELS ON MAIN BODY 550
0003 WEIMAN REMOVAL 270
St 2
0004 ASSEMBLE OUTER CASE 365
0005 FIT TOP PAD 268
0006 STICK LARGE-SIDE ORDER LABEL 117

FIG. 69

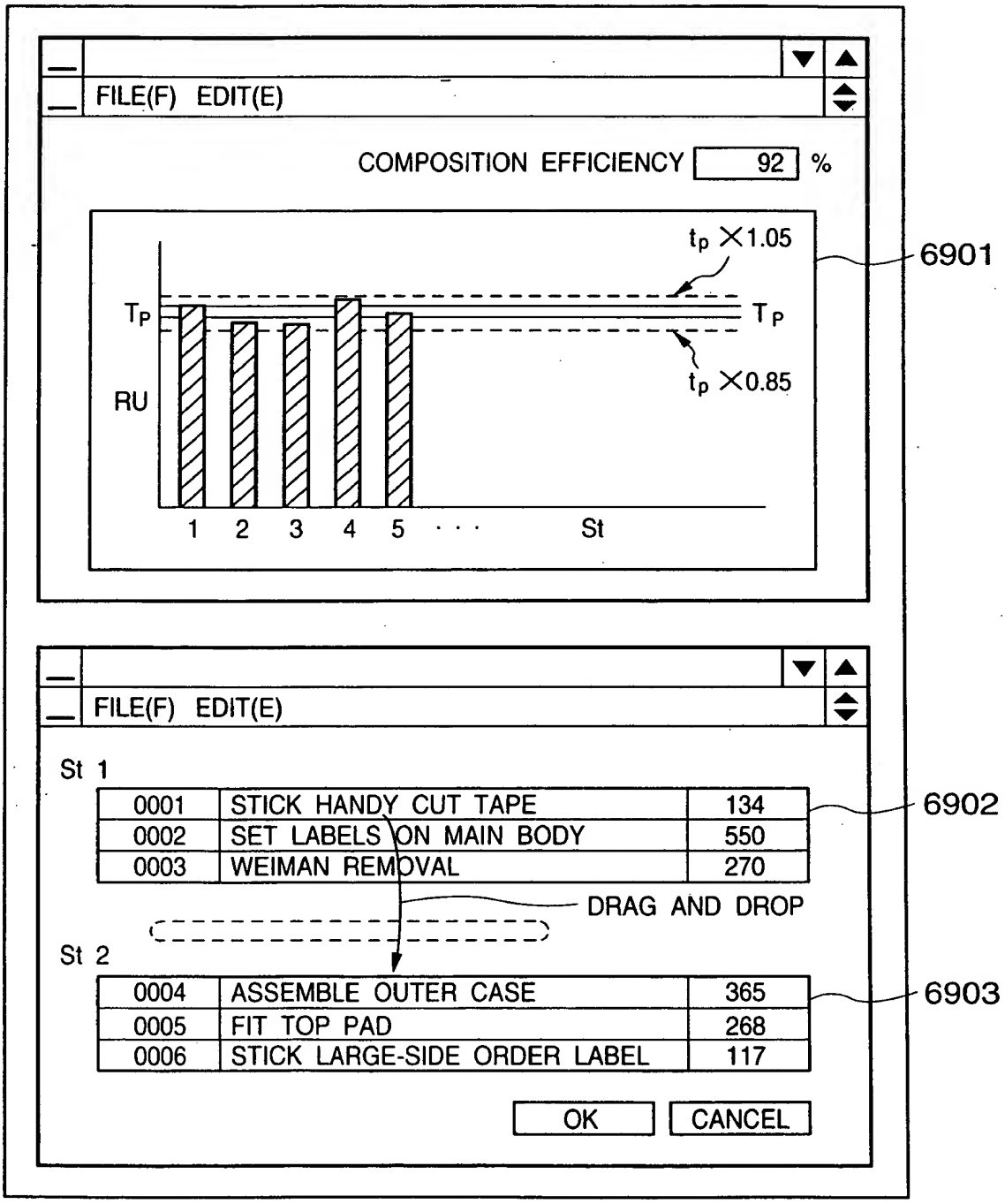

FILE(F) EDIT(E)
COMPOSITION EFFICIENCY 92 %
$t_p \times 1.05$
T_P
T_P
$t_p \times 0.85$
RU
1 2 3 4 5 · · · St
6901
FILE(F) EDIT(E)
St 1
0001 STICK HANDY CUT TAPE 134
0002 SET LABELS ON MAIN BODY 550
0003 WEIMAN REMOVAL 270
6902
DRAG AND DROP
St 2
0004 ASSEMBLE OUTER CASE 365
0005 FIT TOP PAD 268
0006 STICK LARGE-SIDE ORDER LABEL 117
6903
OK
CANCEL

FIG. 70

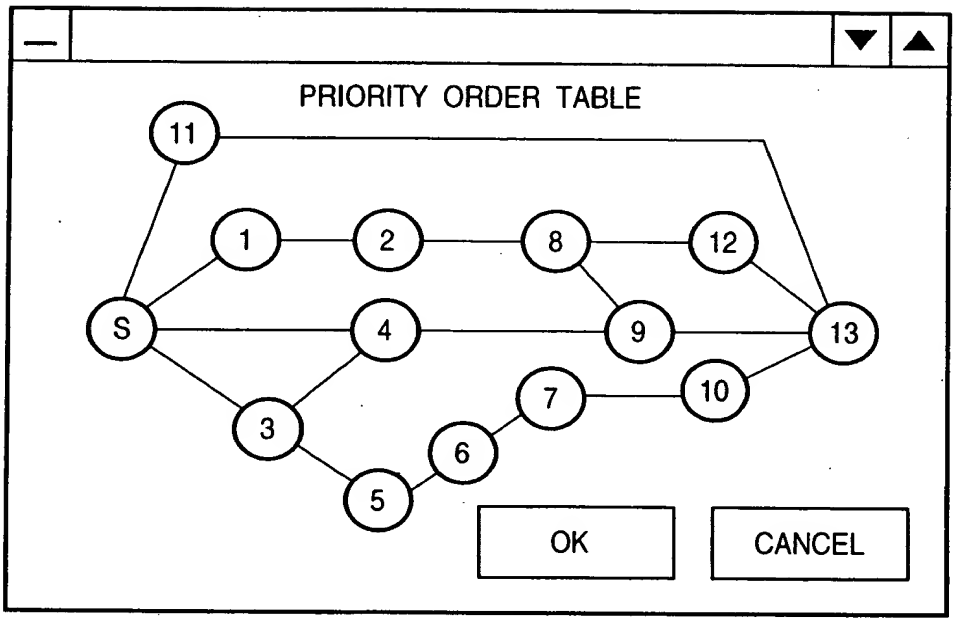


FIG. 71

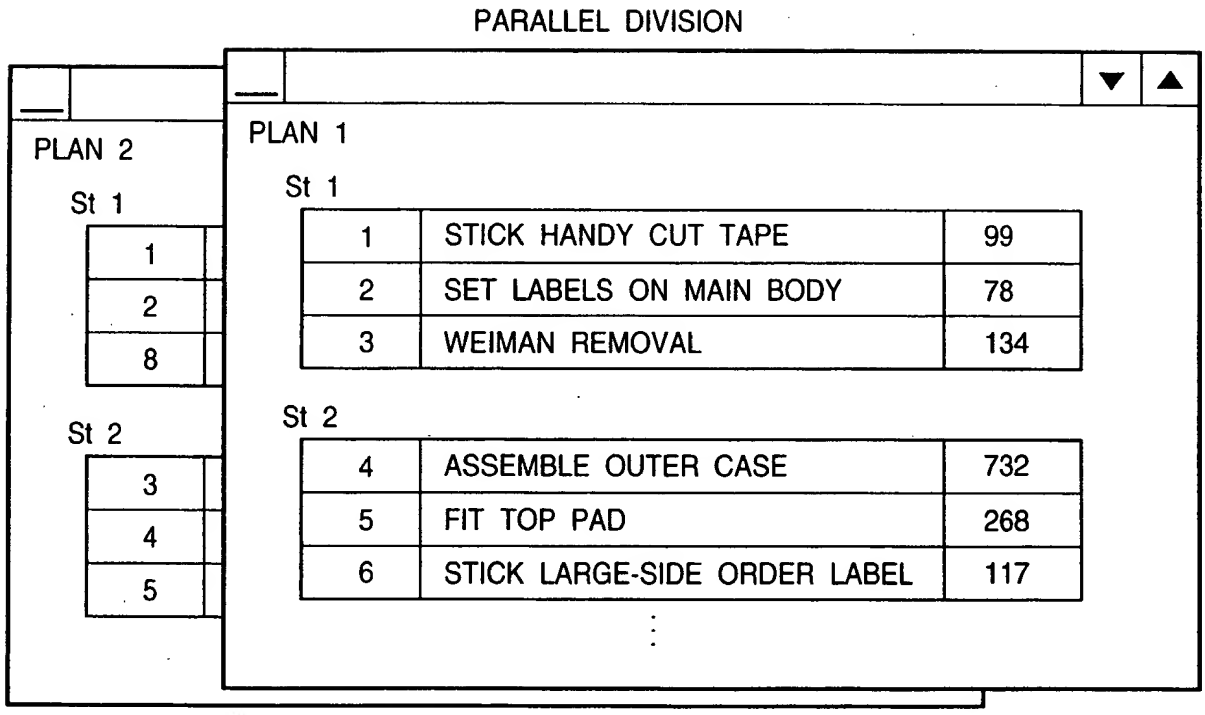

PARALLEL DIVISION
PLAN 2
St 1
1
2
8
St 2
3
4
5
PLAN 1
St 1
1 STICK HANDY CUT TAPE 99
2 SET LABELS ON MAIN BODY 78
3 WEIMAN REMOVAL 134
St 2
4 ASSEMBLE OUTER CASE 732
5 FIT TOP PAD 268
6 STICK LARGE-SIDE ORDER LABEL 117

FIG. 72

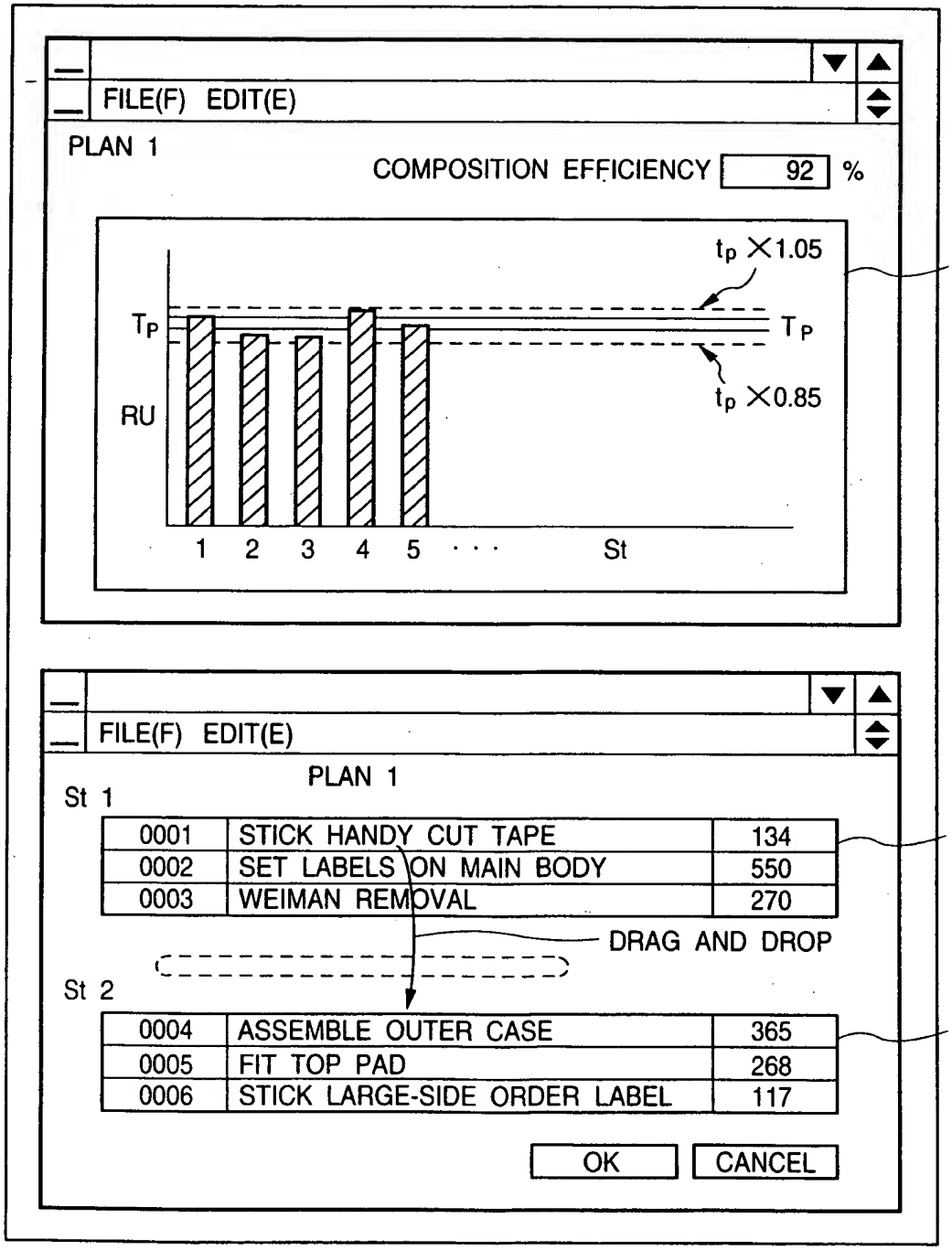

FILE(F) EDIT(E)
PLAN 1
COMPOSITION EFFICIENCY 92 %
tp ×1.05
TP
TP
RU
tp ×0.85
1 2 3 4 5 · · · St
7201
FILE(F) EDIT(E)
PLAN 1
St 1
0001 STICK HANDY CUT TAPE 134
0002 SET LABELS ON MAIN BODY 550
0003 WEIMAN REMOVAL 270
DRAG AND DROP
St 2
0004 ASSEMBLE OUTER CASE 365
0005 FIT TOP PAD 268
0006 STICK LARGE-SIDE ORDER LABEL 117
OK
CANCEL
7202
7203

FIG. 73

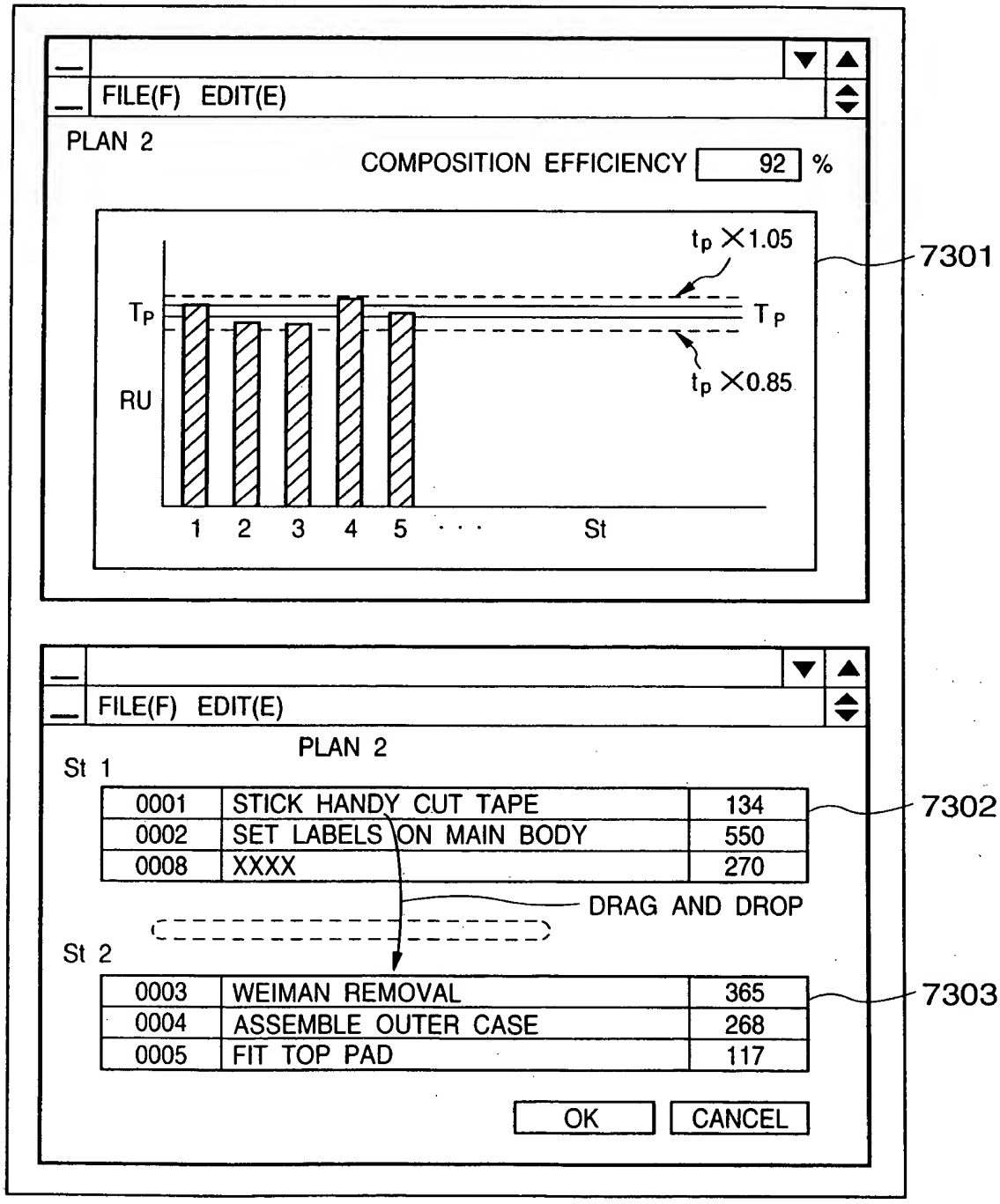

FILE(F) EDIT(E)
PLAN 2
COMPOSITION EFFICIENCY 92 %
tp ×1.05
TP
TP
tp ×0.85
RU
1 2 3 4 5 · · · St
7301
FILE(F) EDIT(E)
PLAN 2
St 1
0001 STICK HANDY CUT TAPE 134
0002 SET LABELS ON MAIN BODY 550
0008 XXXX 270
7302
DRAG AND DROP
St 2
0003 WEIMAN REMOVAL 365
0004 ASSEMBLE OUTER CASE 268
0005 FIT TOP PAD 117
7303
OK
CANCEL

FIG. 74

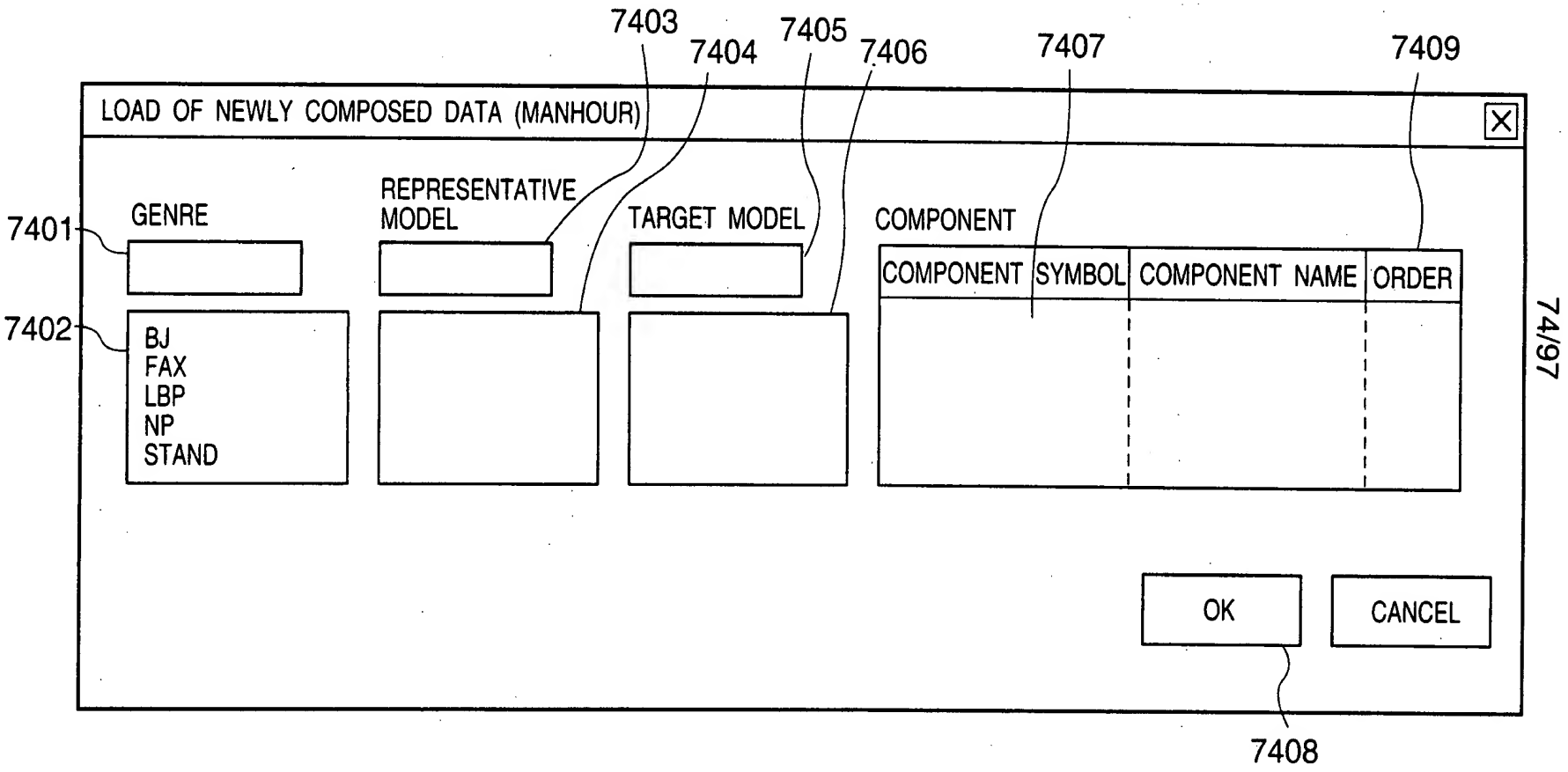

7403
7404
7405
7406
7407
7409
LOAD OF NEWLY COMPOSED DATA (MANHOUR)
7401
GENRE
REPRESENTATIVE MODEL
TARGET MODEL
COMPONENT
7402
BJ
FAX
LBP
NP
STAND
COMPONENT SYMBOL
COMPONENT NAME
ORDER
OK
CANCEL
7408

FIG. 75

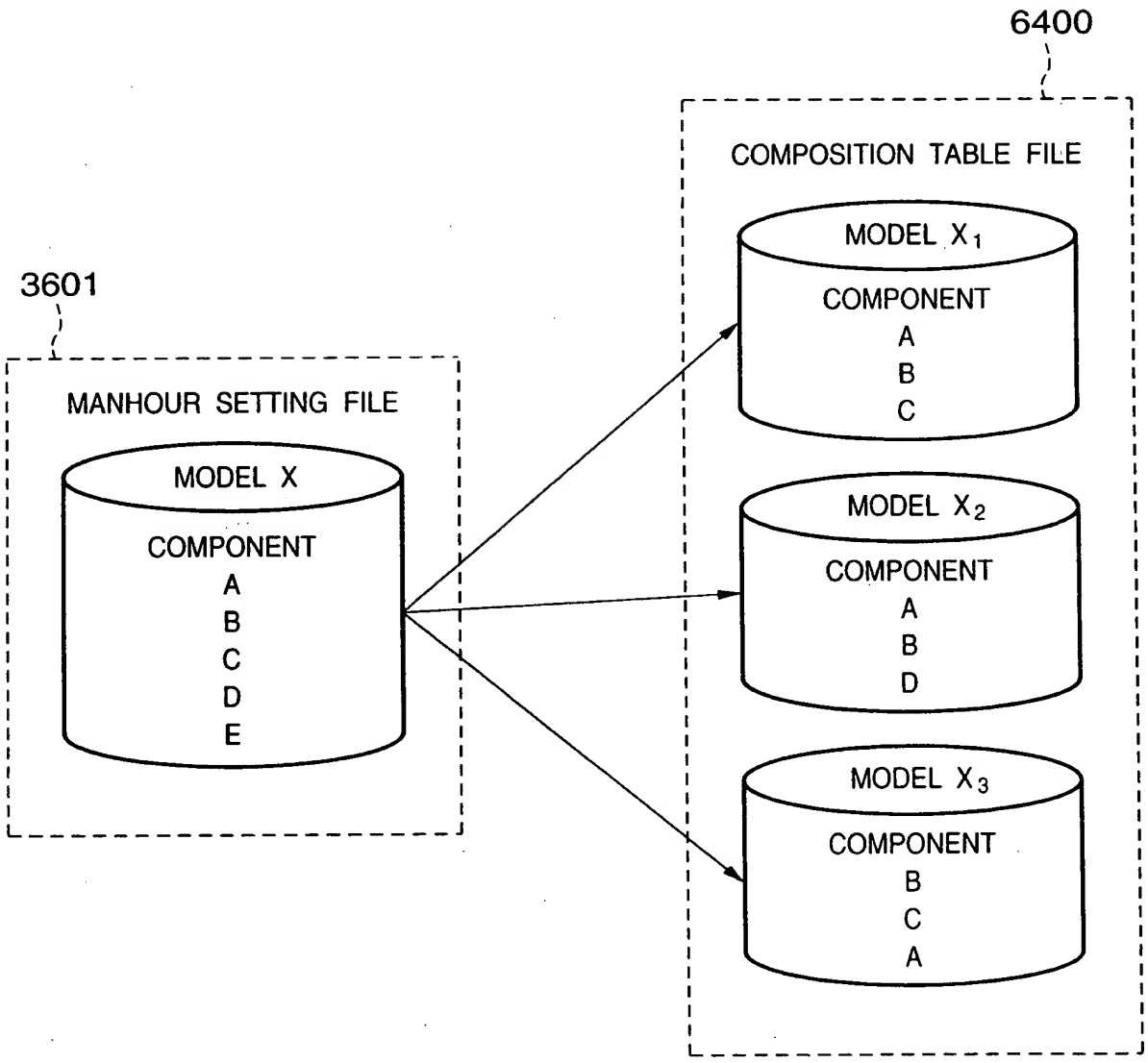

6400
COMPOSITION TABLE FILE
MODEL X1
COMPONENT
A
B
C
MODEL X2
COMPONENT
A
B
D
MODEL X3
COMPONENT
B
C
A
3601
MANHOUR SETTING FILE
MODEL X
COMPONENT
A
B
C
D
E

FIG. 76

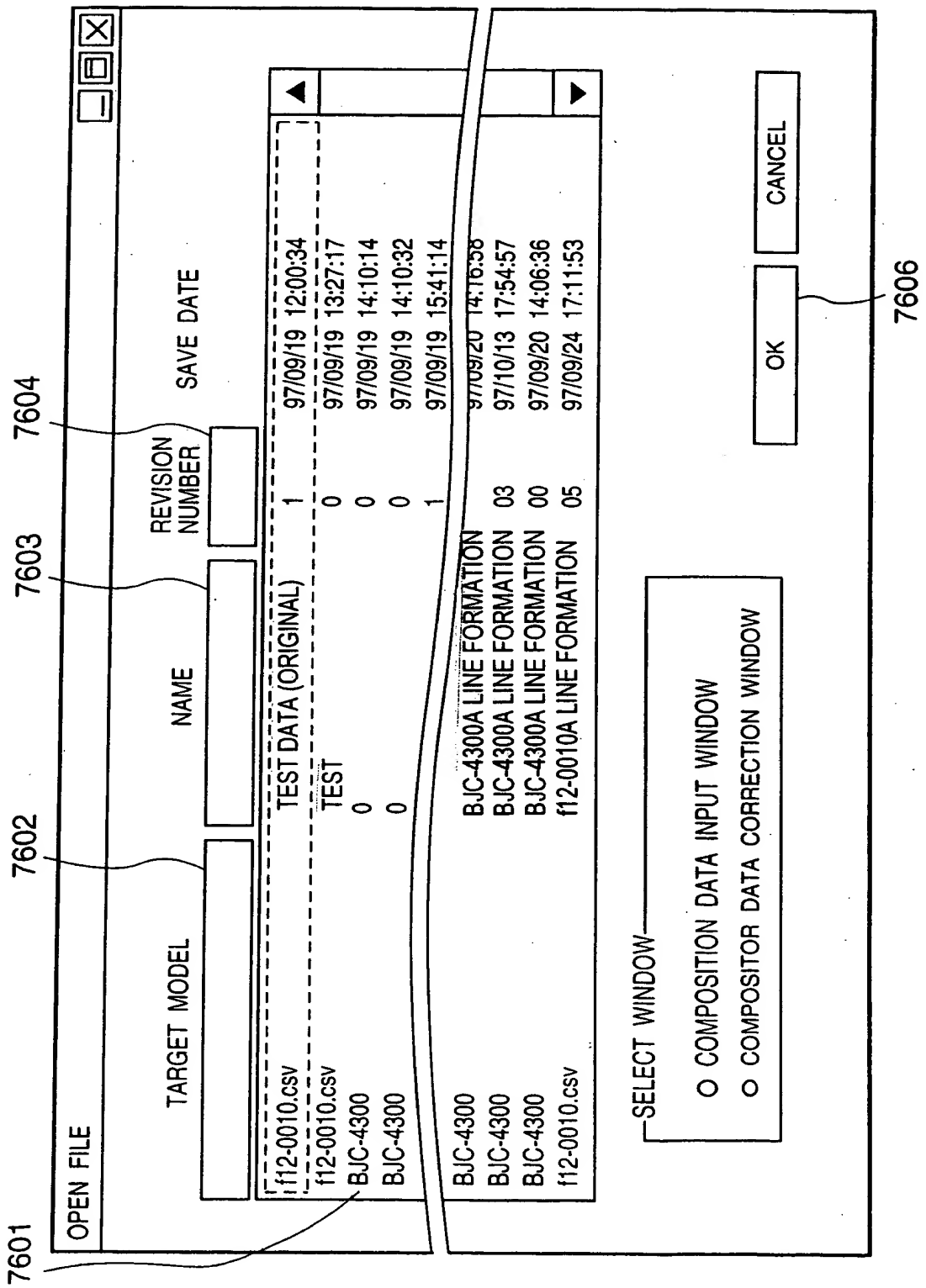

7601
7602
7603
7604
7606
OPEN FILE
TARGET MODEL
NAME
REVISION NUMBER
SAVE DATE
f12-0010.csv
f12-0010.csv
BJC-4300
BJC-4300
TEST DATA (ORIGINAL)
TEST
0
0
1
97/09/19 12:00:34
97/09/19 13:27:17
97/09/19 14:10:14
97/09/19 14:10:32
97/09/19 15:41:14
BJC-4300
BJC-4300
BJC-4300
f12-0010.csv
BJC-4300A LINE FORMATION
BJC-4300A LINE FORMATION
BJC-4300A LINE FORMATION
f12-0010A LINE FORMATION
03
00
05
97/10/13 17:54:57
97/09/20 14:06:36
97/09/24 17:11:53
SELECT WINDOW
O COMPOSITION DATA INPUT WINDOW
O COMPOSITOR DATA CORRECTION WINDOW
OK
CANCEL

FIG. 77

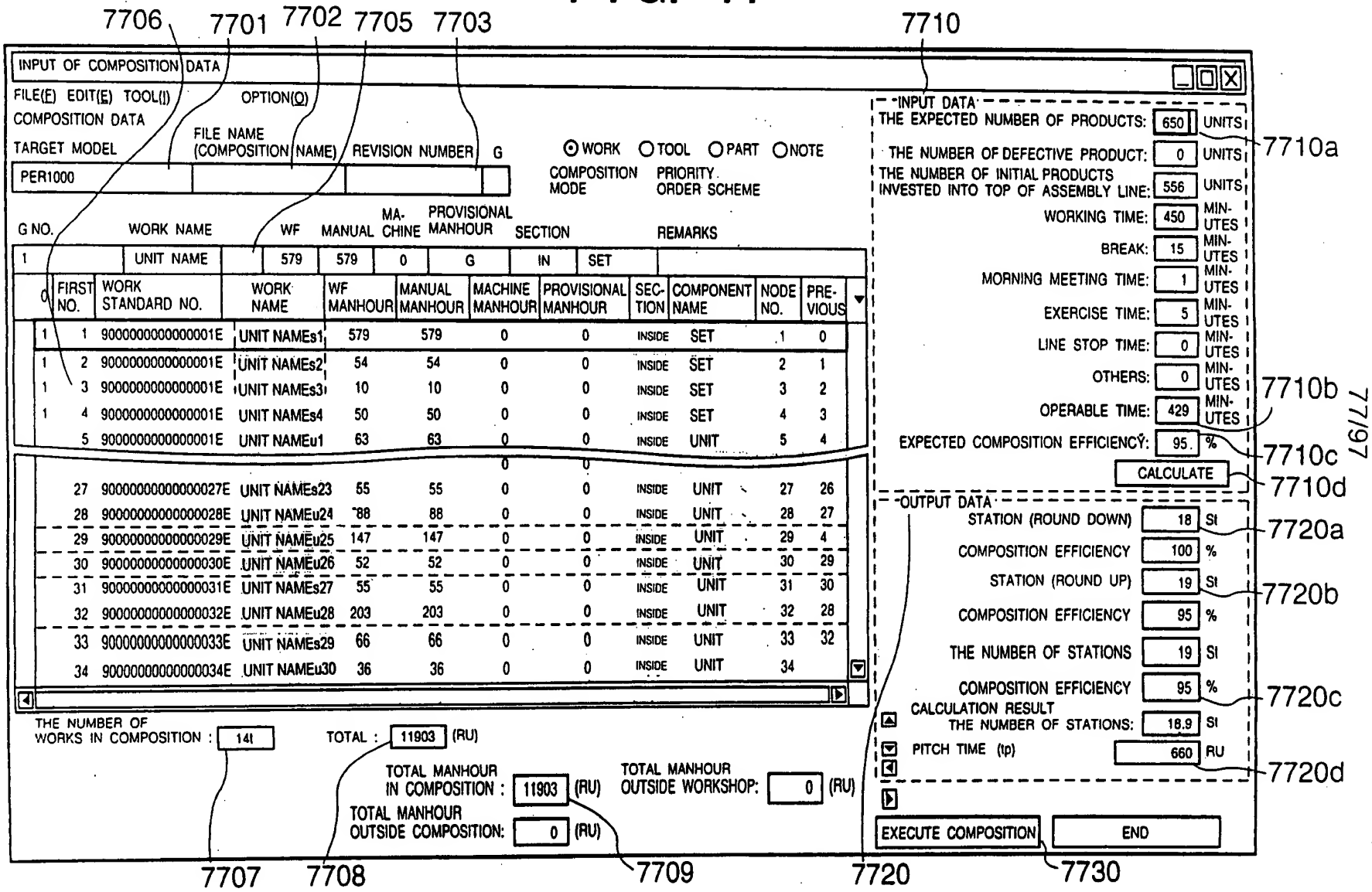

7706
7701
7702
7705
7703
7710
INPUT OF COMPOSITION DATA
FILE(F) EDIT(E) TOOL(I) OPTION(O)
COMPOSITION DATA
TARGET MODEL
FILE NAME (COMPOSITION NAME)
REVISION NUMBER
G
PER1000
WORK TOOL PART NOTE
COMPOSITION MODE
PRIORITY ORDER SCHEME
G NO.
WORK NAME
WF
MANUAL
MA-CHINE
PROVISIONAL MANHOUR
SECTION
REMARKS
1
UNIT NAME
579
579
0
G
IN
SET
FIRST NO.
WORK STANDARD NO.
WORK NAME
WF MANHOUR
MANUAL MANHOUR
MACHINE MANHOUR
PROVISIONAL MANHOUR
SECTION
COMPONENT NAME
NODE NO.
PREVIOUS
1 1 90000000000000001E UNIT NAMEs1 579 579 0 0 INSIDE SET 1 0
1 2 90000000000000001E UNIT NAMEs2 54 54 0 0 INSIDE SET 2 1
1 3 90000000000000001E UNIT NAMEs3 10 10 0 0 INSIDE SET 3 2
1 4 90000000000000001E UNIT NAMEs4 50 50 0 0 INSIDE SET 4 3
5 90000000000000001E UNIT NAMEu1 63 63 0 0 INSIDE UNIT 5 4
27 90000000000000027E UNIT NAMEs23 55 55 0 0 INSIDE UNIT 27 26
28 90000000000000028E UNIT NAMEu24 88 88 0 0 INSIDE UNIT 28 27
29 90000000000000029E UNIT NAMEu25 147 147 0 0 INSIDE UNIT 29 4
30 90000000000000030E UNIT NAMEu26 52 52 0 0 INSIDE UNIT 30 29
31 90000000000000031E UNIT NAMEs27 55 55 0 0 INSIDE UNIT 31 30
32 90000000000000032E UNIT NAMEu28 203 203 0 0 INSIDE UNIT 32 28
33 90000000000000033E UNIT NAMEs29 66 66 0 0 INSIDE UNIT 33 32
34 90000000000000034E UNIT NAMEu30 36 36 0 0 INSIDE UNIT 34
THE NUMBER OF WORKS IN COMPOSITION : 141
TOTAL : 11903 (RU)
TOTAL MANHOUR IN COMPOSITION : 11903 (RU)
TOTAL MANHOUR OUTSIDE COMPOSITION: 0 (RU)
TOTAL MANHOUR OUTSIDE WORKSHOP: 0 (RU)
INPUT DATA
THE EXPECTED NUMBER OF PRODUCTS: 650 UNITS
THE NUMBER OF DEFECTIVE PRODUCT: 0 UNITS
THE NUMBER OF INITIAL PRODUCTS INVESTED INTO TOP OF ASSEMBLY LINE: 556 UNITS
WORKING TIME: 450 MIN-UTES
BREAK: 15 MIN-UTES
MORNING MEETING TIME: 1 MIN-UTES
EXERCISE TIME: 5 MIN-UTES
LINE STOP TIME: 0 MIN-UTES
OTHERS: 0 MIN-UTES
OPERABLE TIME: 429 MIN-UTES
EXPECTED COMPOSITION EFFICIENCY: 95 %
CALCULATE
OUTPUT DATA
STATION (ROUND DOWN) 18 St
COMPOSITION EFFICIENCY 100 %
STATION (ROUND UP) 19 St
COMPOSITION EFFICIENCY 95 %
THE NUMBER OF STATIONS 19 St
COMPOSITION EFFICIENCY 95 %
CALCULATION RESULT
THE NUMBER OF STATIONS: 18.9 St
PITCH TIME (tp) 660 RU
EXECUTE COMPOSITION
END
7710a
7710b
7710c
7710d
7720a
7720b
7720c
7720d
7707
7708
7709
7720
7730

FIG. 78

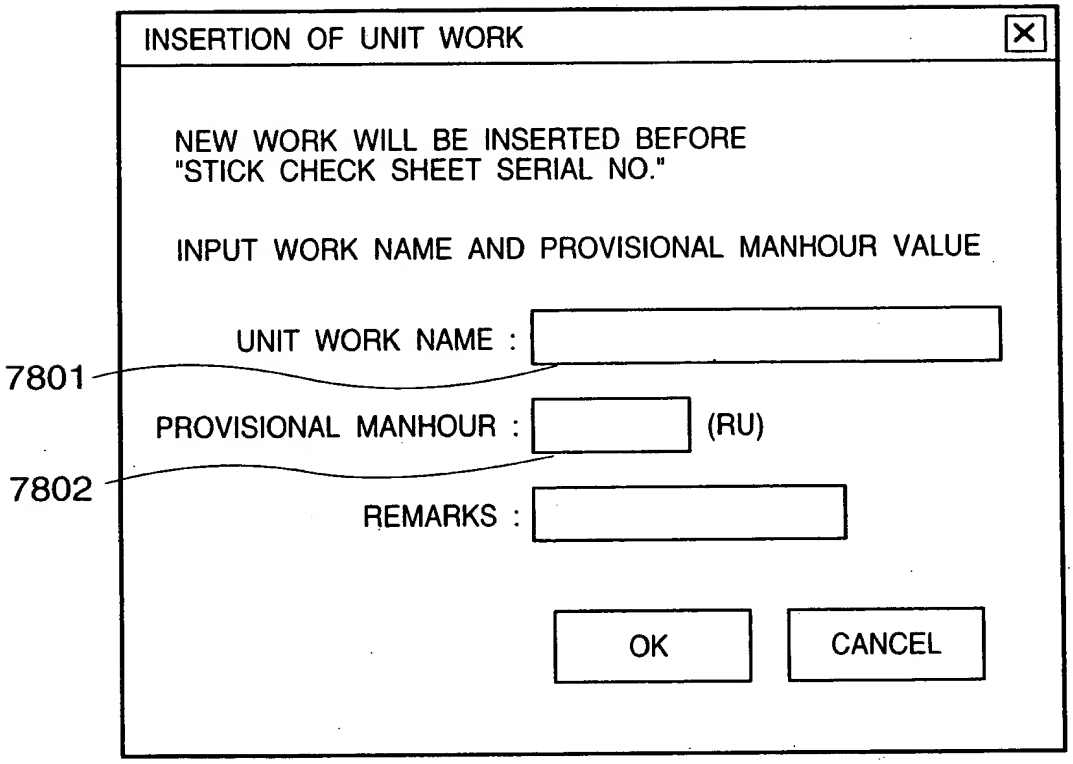

INSERTION OF UNIT WORK
NEW WORK WILL BE INSERTED BEFORE
"STICK CHECK SHEET SERIAL NO."
INPUT WORK NAME AND PROVISIONAL MANHOUR VALUE
UNIT WORK NAME :
7801
PROVISIONAL MANHOUR :
(RU)
7802
REMARKS :
OK
CANCEL

FIG. 79

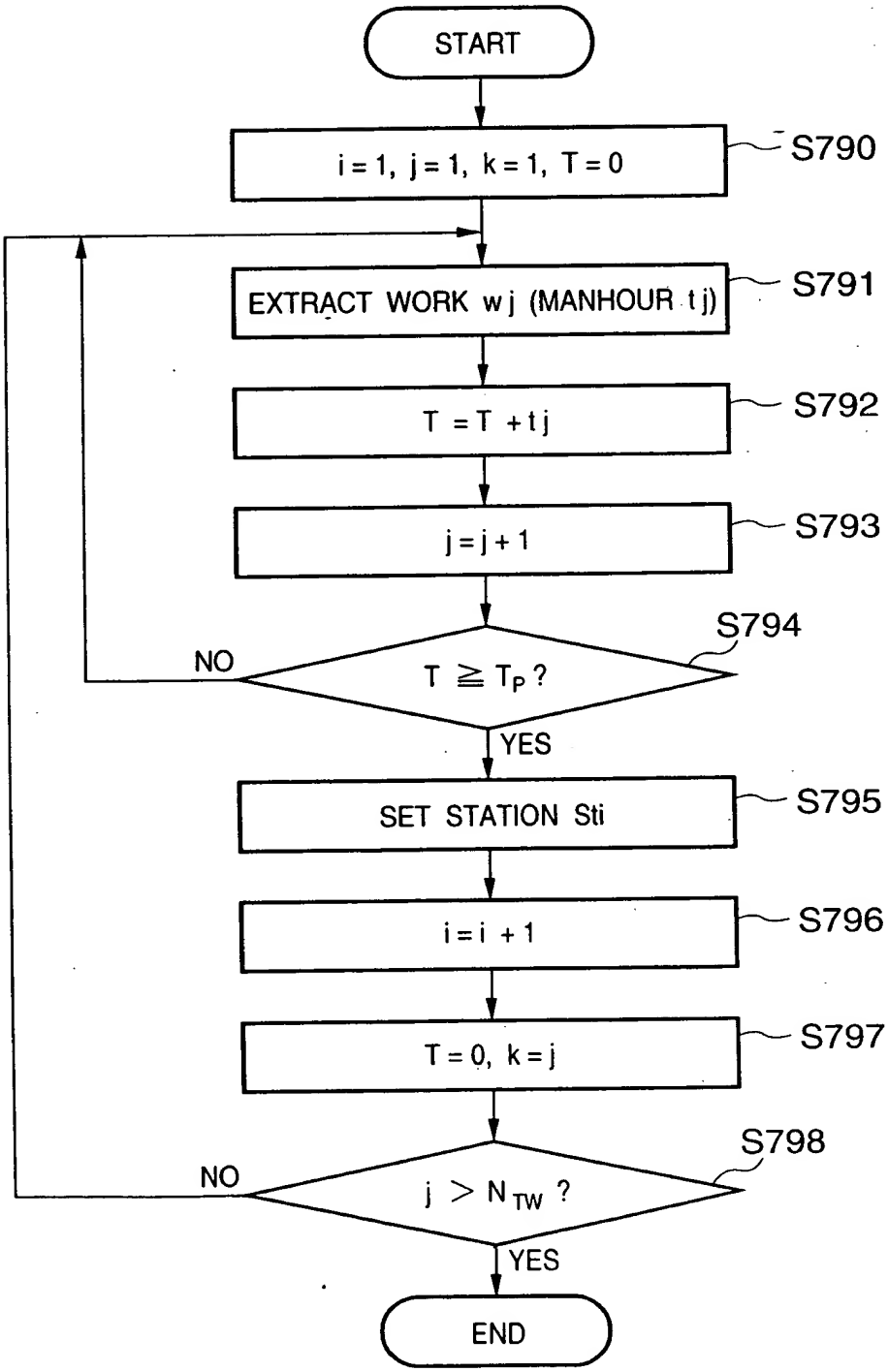

START
i = 1, j = 1, k = 1, T = 0
S790
EXTRACT WORK wj (MANHOUR tj)
S791
T = T + tj
S792
j = j + 1
S793
S794
NO
T ≧ TP ?
YES
SET STATION Sti
S795
i = i + 1
S796
T = 0, k = j
S797
S798
NO
j > NTW ?
YES
END

FIG. 80

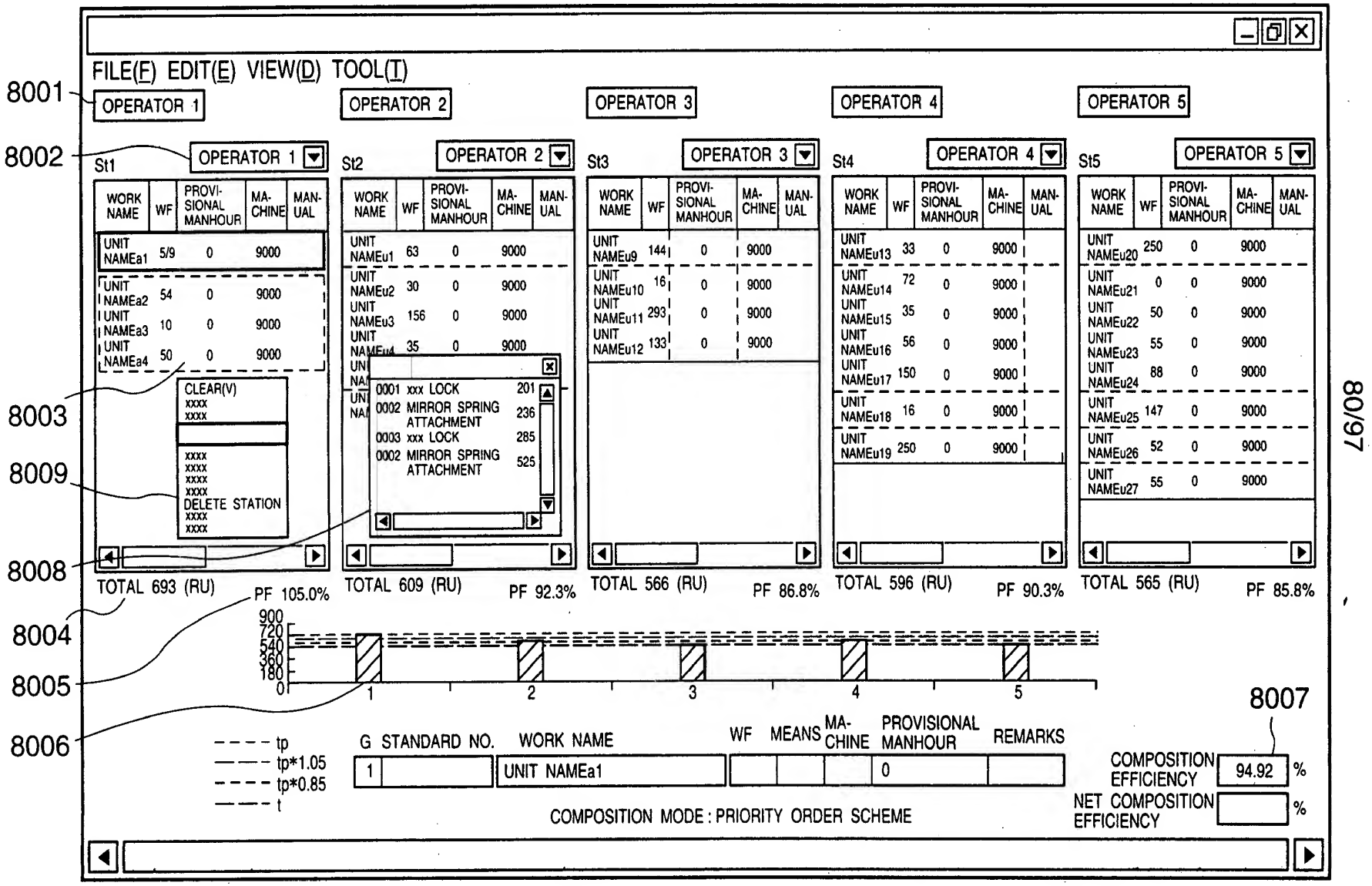

FILE(F) EDIT(E) VIEW(D) TOOL(T)
8001
OPERATOR 1
OPERATOR 2
OPERATOR 3
OPERATOR 4
OPERATOR 5
8002
St1
St2
St3
St4
St5
WORK NAME
WF
PROVISIONAL MANHOUR
MACHINE
MANUAL
UNIT NAMEa1 5/9 0 9000
UNIT NAMEa2 54 0 9000
UNIT NAMEa3 10 0 9000
UNIT NAMEa4 50 0 9000
UNIT NAMEu1 63 0 9000
UNIT NAMEu2 30 0 9000
UNIT NAMEu3 156 0 9000
UNIT NAMEu4 35 0 9000
UNIT NAMEu9 144 0 9000
UNIT NAMEu10 16 0 9000
UNIT NAMEu11 293 0 9000
UNIT NAMEu12 133 0 9000
UNIT NAMEu13 33 0 9000
UNIT NAMEu14 72 0 9000
UNIT NAMEu15 35 0 9000
UNIT NAMEu16 56 0 9000
UNIT NAMEu17 150 0 9000
UNIT NAMEu18 16 0 9000
UNIT NAMEu19 250 0 9000
UNIT NAMEu20 250 0 9000
UNIT NAMEu21 0 0 9000
UNIT NAMEu22 50 0 9000
UNIT NAMEu23 55 0 9000
UNIT NAMEu24 88 0 9000
UNIT NAMEu25 147 0 9000
UNIT NAMEu26 52 0 9000
UNIT NAMEu27 55 0 9000
8003
CLEAR(V)
xxxx
xxxx
8009
DELETE STATION
0001 xxx LOCK 201
0002 MIRROR SPRING ATTACHMENT 236
0003 xxx LOCK 285
0002 MIRROR SPRING ATTACHMENT 525
8008
TOTAL 693 (RU)
PF 105.0%
TOTAL 609 (RU)
PF 92.3%
TOTAL 566 (RU)
PF 86.8%
TOTAL 596 (RU)
PF 90.3%
TOTAL 565 (RU)
PF 85.8%
8004
8005
8006
900
720
540
360
180
0
1
2
3
4
5
tp
tp*1.05
tp*0.85
t
G STANDARD NO. WORK NAME WF MEANS MACHINE PROVISIONAL MANHOUR REMARKS
1 UNIT NAMEa1 0
COMPOSITION MODE : PRIORITY ORDER SCHEME
8007
COMPOSITION EFFICIENCY 94.92 %
NET COMPOSITION EFFICIENCY %

FIG. 81

STATION 1

WORK NAME	MANHOUR
A1	10
A2	20
A3	12
A4	50

MANHOUR IN STATION = 92

STATION 2

WORK NAME	MANHOUR
B1	10
B2	25
B3	11
B4	8

MANHOUR IN STATION = 54

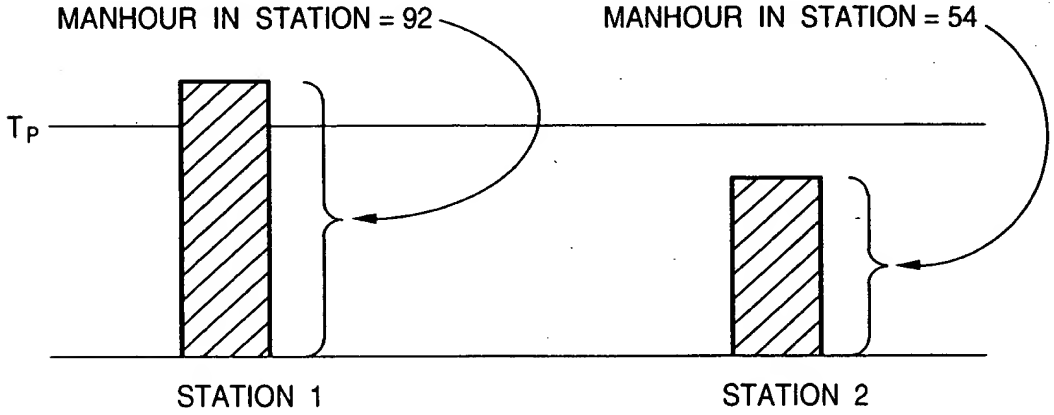


FIG. 82

STATION 1

WORK NAME	MANHOUR
A1	10
A2	20
A3	12
A4 - 1	25
A4 - 2	25

MANHOUR IN STATION = 92

STATION 2

WORK NAME	MANHOUR
B1	10
B2	25
B3	11
B4	8

MANHOUR IN STATION = 54

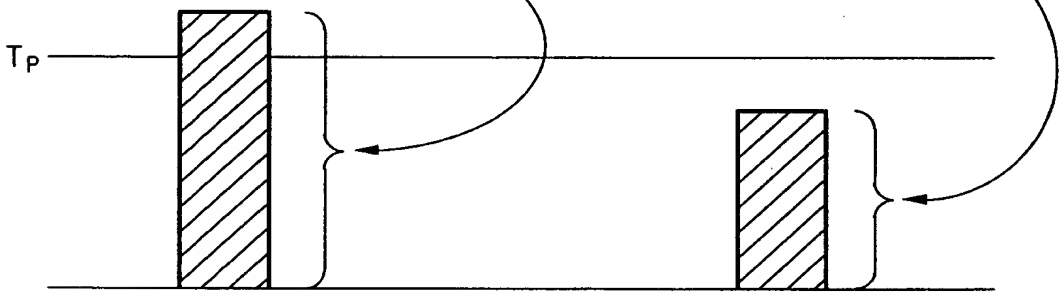


FIG. 83

STATION 1

WORK NAME	MANHOUR
A1	10
A2	20
A3	12
A4 - 1	25

MANHOUR IN STATION = 77

STATION 2

WORK NAME	MANHOUR
A4 - 2	25
B1	10
B2	25
B3	11

MANHOUR IN STATION = 79

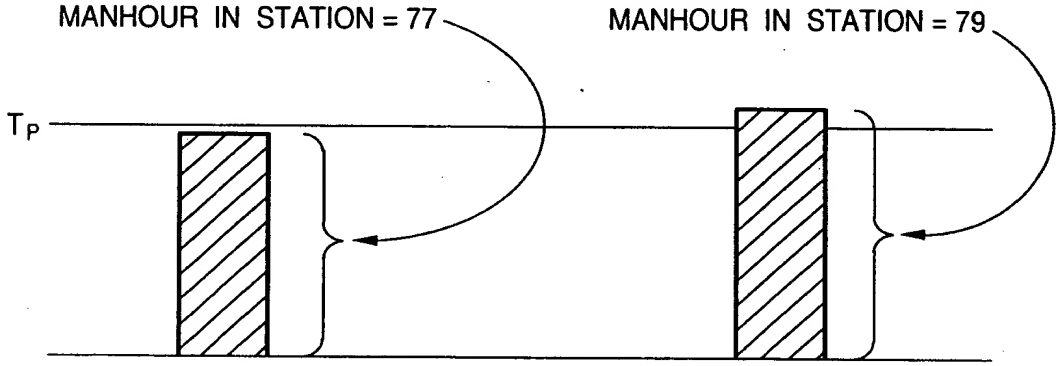


FIG. 84

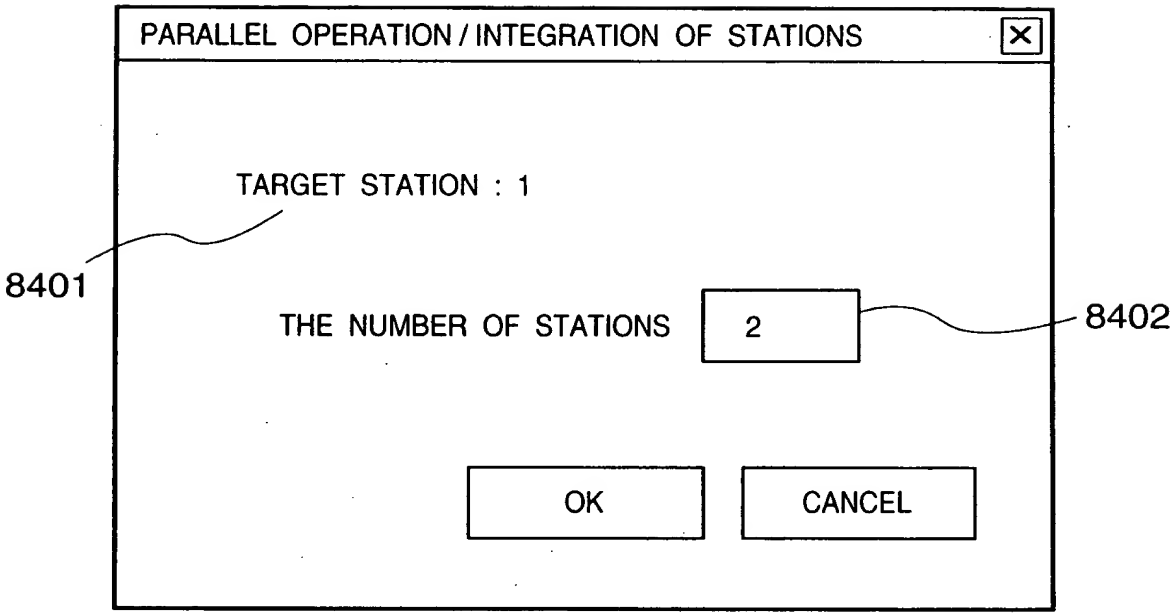

PARALLEL OPERATION / INTEGRATION OF STATIONS
TARGET STATION : 1
8401
THE NUMBER OF STATIONS
2
8402
OK
CANCEL

FIG. 85

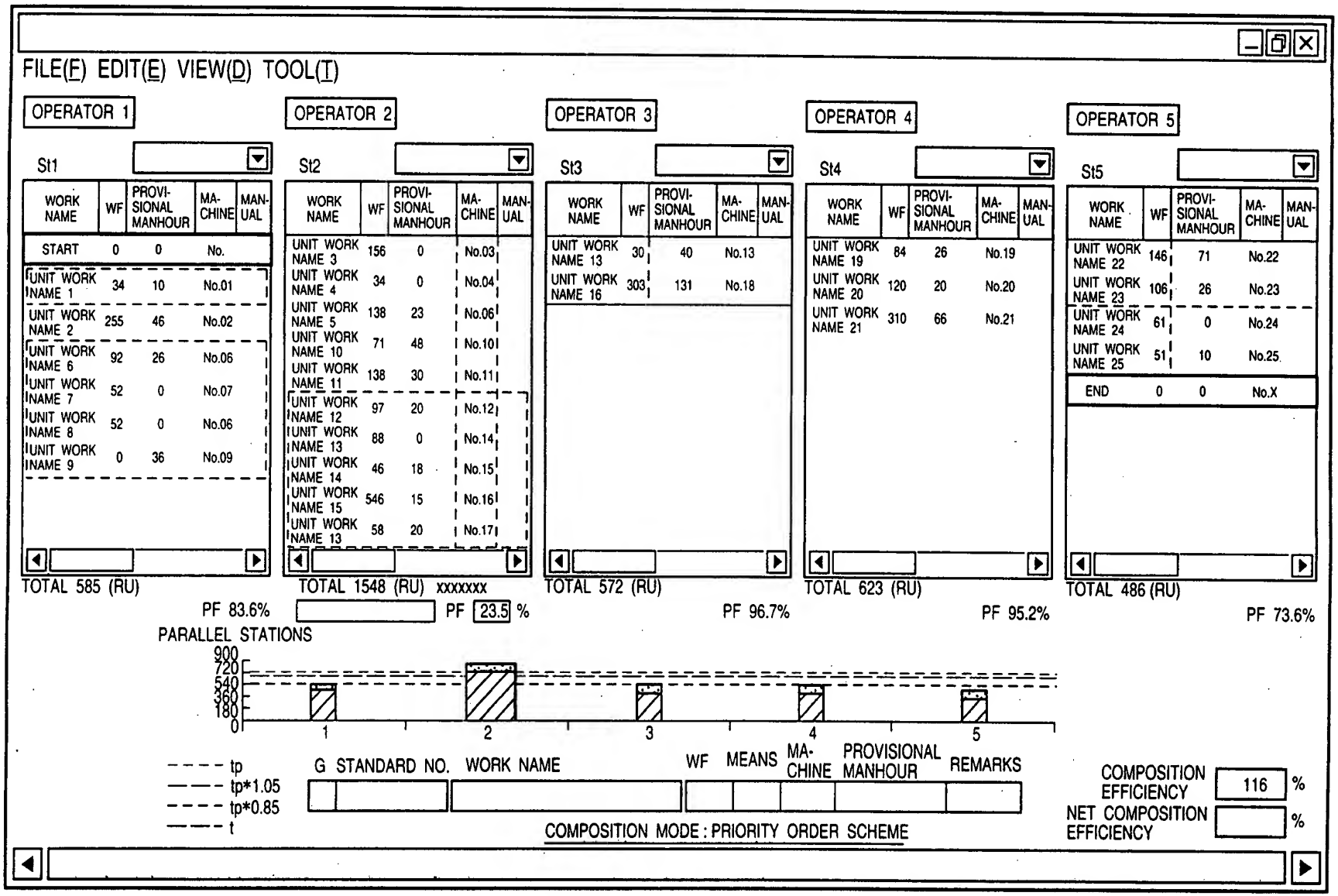

FILE(F) EDIT(E) VIEW(D) TOOL(T)
OPERATOR 1
OPERATOR 2
OPERATOR 3
OPERATOR 4
OPERATOR 5
St1
St2
St3
St4
St5
WORK NAME
WF
PROVI-SIONAL MANHOUR
MA-CHINE
MAN-UAL
START 0 0 No.
UNIT WORK NAME 1 34 10 No.01
UNIT WORK NAME 2 255 46 No.02
UNIT WORK NAME 6 92 26 No.06
UNIT WORK NAME 7 52 0 No.07
UNIT WORK NAME 8 52 0 No.06
UNIT WORK NAME 9 0 36 No.09
UNIT WORK NAME 3 156 0 No.03
UNIT WORK NAME 4 34 0 No.04
UNIT WORK NAME 5 138 23 No.06
UNIT WORK NAME 10 71 48 No.10
UNIT WORK NAME 11 138 30 No.11
UNIT WORK NAME 12 97 20 No.12
UNIT WORK NAME 13 88 0 No.14
UNIT WORK NAME 14 46 18 No.15
UNIT WORK NAME 15 546 15 No.16
UNIT WORK NAME 13 58 20 No.17
UNIT WORK NAME 13 30 40 No.13
UNIT WORK NAME 16 303 131 No.18
UNIT WORK NAME 19 84 26 No.19
UNIT WORK NAME 20 120 20 No.20
UNIT WORK NAME 21 310 66 No.21
UNIT WORK NAME 22 146 71 No.22
UNIT WORK NAME 23 106 26 No.23
UNIT WORK NAME 24 61 0 No.24
UNIT WORK NAME 25 51 10 No.25
END 0 0 No.X
TOTAL 585 (RU)
TOTAL 1548 (RU) xxxxxxx
TOTAL 572 (RU)
TOTAL 623 (RU)
TOTAL 486 (RU)
PF 83.6%
PF 23.5 %
PF 96.7%
PF 95.2%
PF 73.6%
PARALLEL STATIONS
900
720
540
360
180
0
1
2
3
4
5
tp
tp*1.05
tp*0.85
t
G STANDARD NO. WORK NAME
WF MEANS MA-CHINE PROVISIONAL MANHOUR REMARKS
COMPOSITION MODE : PRIORITY ORDER SCHEME
COMPOSITION EFFICIENCY 116 %
NET COMPOSITION EFFICIENCY %

FIG. 86

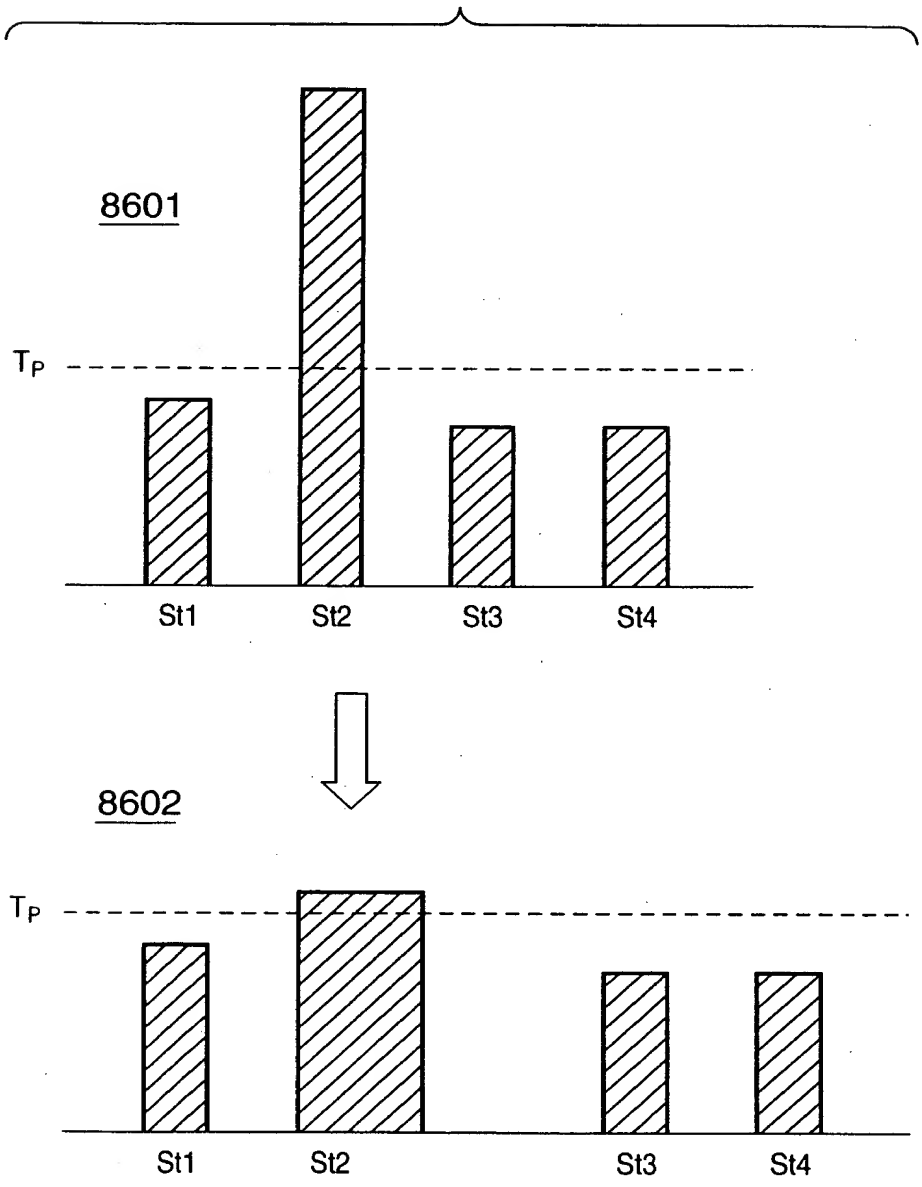


FIG. 87

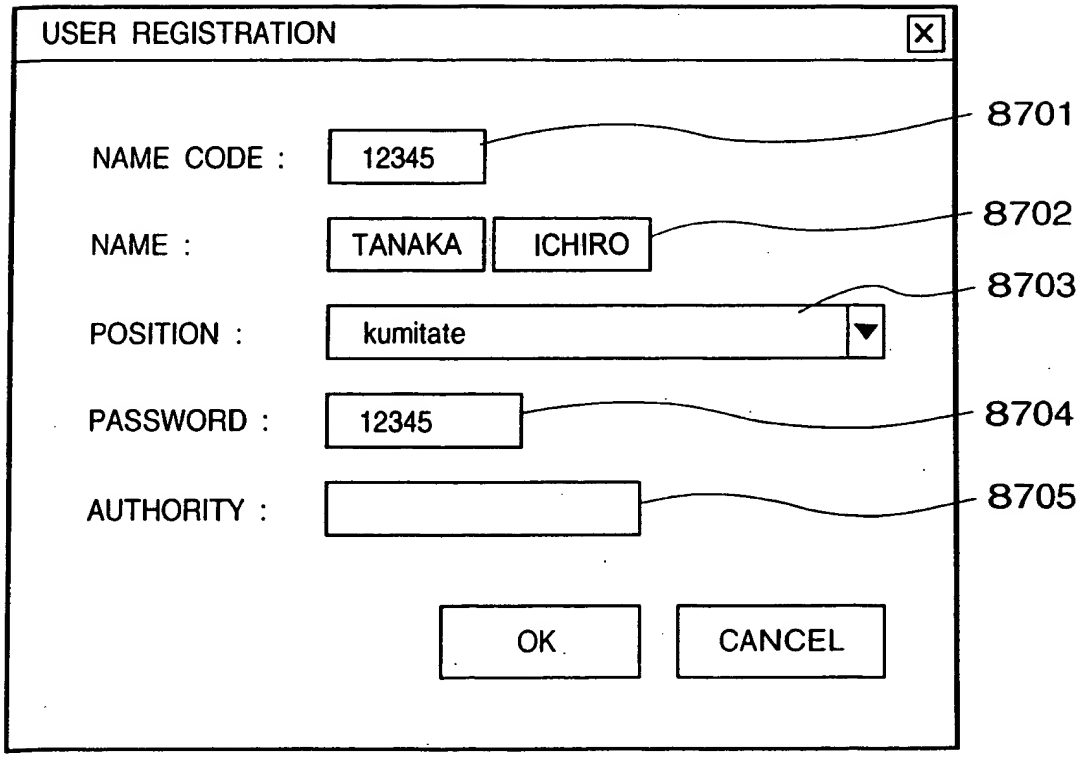

USER REGISTRATION
NAME CODE :
12345
NAME :
TANAKA
ICHIRO
POSITION :
kumitate
PASSWORD :
12345
AUTHORITY :
OK
CANCEL
8701
8702
8703
8704
8705

FIG. 88

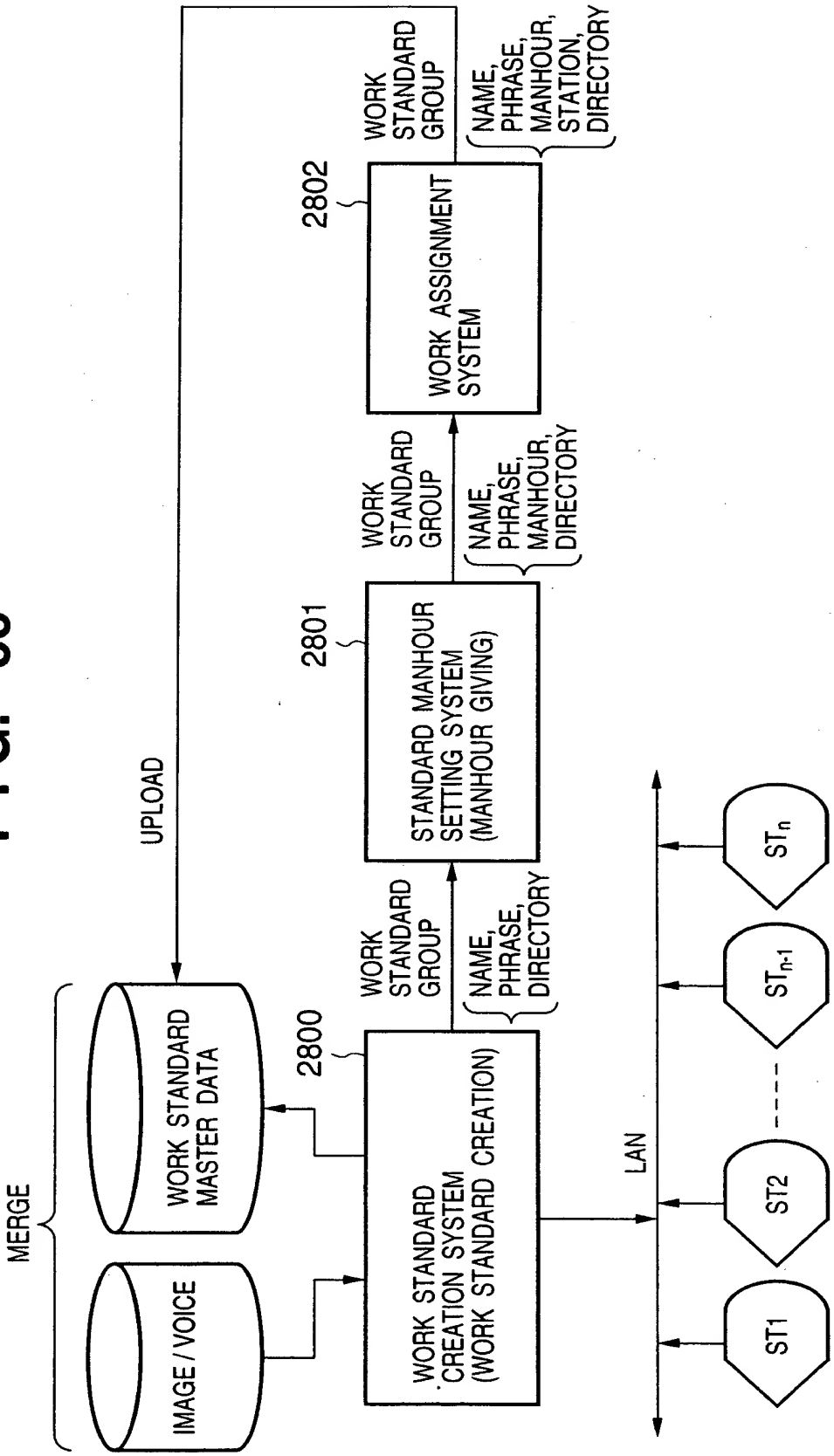

MERGE
IMAGE / VOICE
WORK STANDARD MASTER DATA
UPLOAD
2800
WORK STANDARD CREATION SYSTEM (WORK STANDARD CREATION)
WORK STANDARD GROUP
NAME, PHRASE, DIRECTORY
2801
STANDARD MANHOUR SETTING SYSTEM (MANHOUR GIVING)
WORK STANDARD GROUP
NAME, PHRASE, MANHOUR, DIRECTORY
2802
WORK ASSIGNMENT SYSTEM
WORK STANDARD GROUP
NAME, PHRASE, MANHOUR, STATION, DIRECTORY
LAN
ST1
ST2
ST_{n-1}
ST_n

FIG. 89

DIRECTORY NAME	IMAGE DATA	OPERATION (VERB)	PARAMETER 1	PARAMETER 2	PARAMETER 3
xxxxxx1	SCREW	SCREW	SCREW CLOCKWISE	DISTANCE MOVEMENT 10mm	TORQUE 10Kg.M
xxxxxx2	SCREW	SCREW	SCREW CLOCKWISE	DISTANCE MOVEMENT 20mm	TORQUE 20Kg.M
xxxxxx3	SCREW	SCREW	SCREW CLOCKWISE	DISTANCE MOVEMENT 20mm	TORQUE 30Kg.M
...	...	...	...	...	...
yyyyyy1	ROTATE	ROTATE	CLOCKWISE	DISTANCE MOVEMENT 20mm	
yyyyyy2	ROTATE	ROTATE	COUNTERCLOCKWISE	DISTANCE MOVEMENT 20mm	
...	...	...	...	...	...
zzzzzz1	OPEN	OPEN	OPEN UPWARD	DISTANCE MOVEMENT 30mm	WEIGHT 100g
zzzzzz2	OPEN	OPEN	OPEN DOWNWARD	DISTANCE MOVEMENT 40mm	WEIGHT 200g
...	...	...	...	...	...

FIG. 90

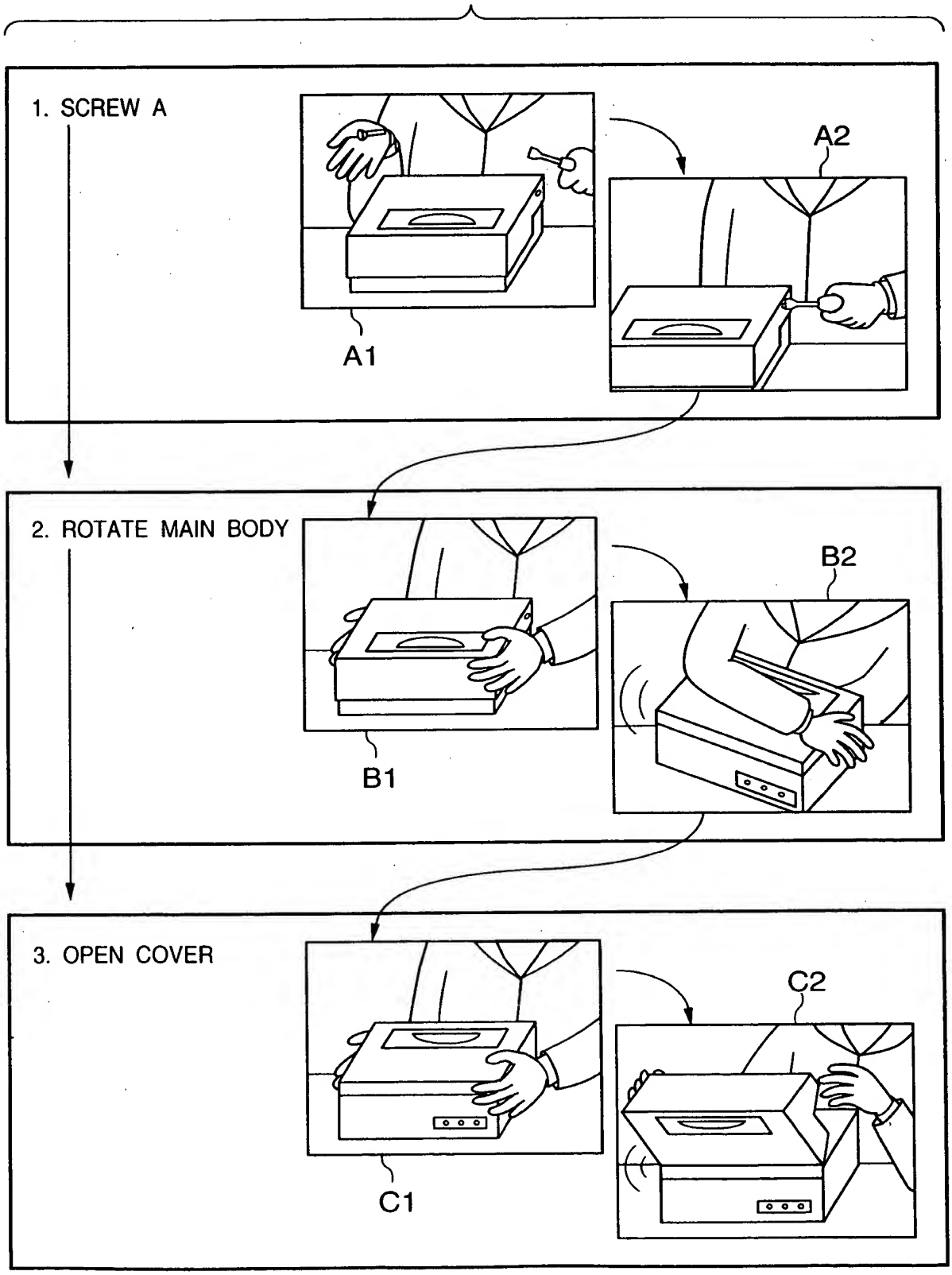


FIG. 91

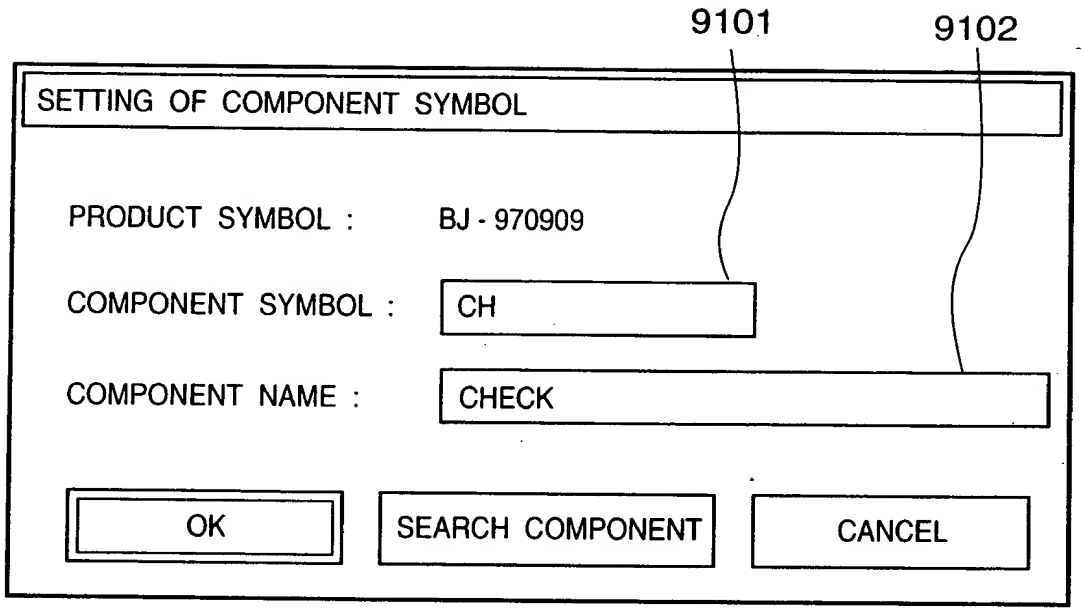

9101
9102
SETTING OF COMPONENT SYMBOL
PRODUCT SYMBOL :
BJ - 970909
COMPONENT SYMBOL :
CH
COMPONENT NAME :
CHECK
OK
SEARCH COMPONENT
CANCEL

FIG. 92

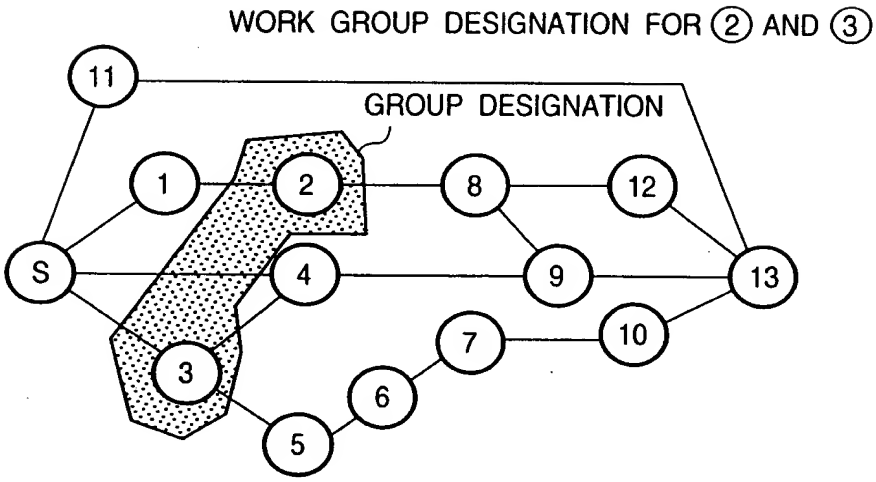

WORK GROUP DESIGNATION FOR ② AND ③
GROUP DESIGNATION
11
1
2
8
12
S
4
9
13
7
10
3
6
5

FIG. 93

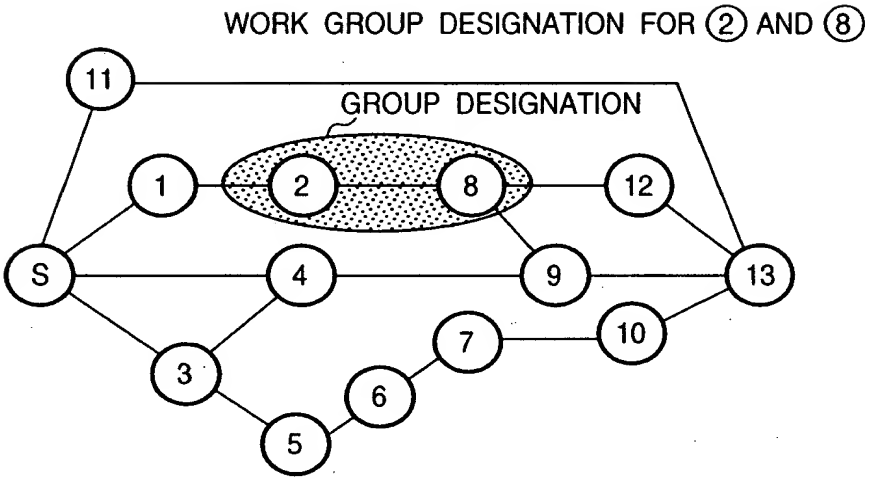

WORK GROUP DESIGNATION FOR ② AND ⑧
GROUP DESIGNATION
11
1
2
8
12
S
4
9
13
7
10
3
6
5

FIG. 94

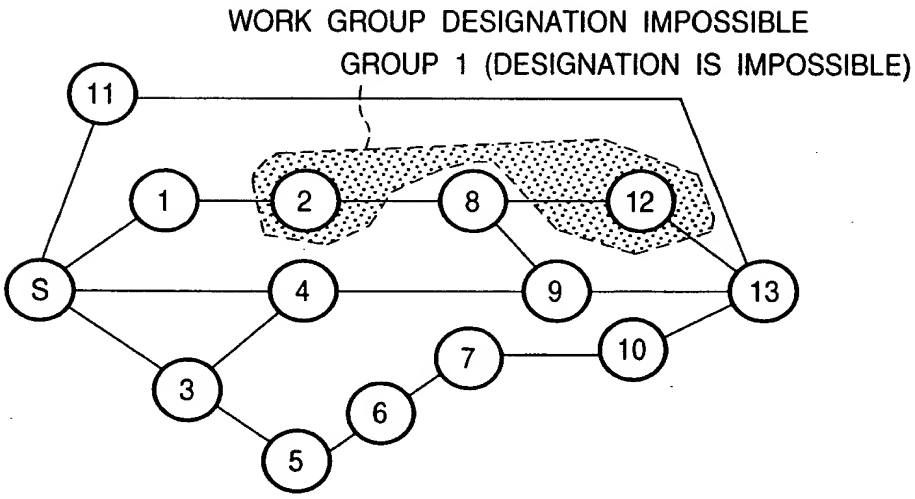
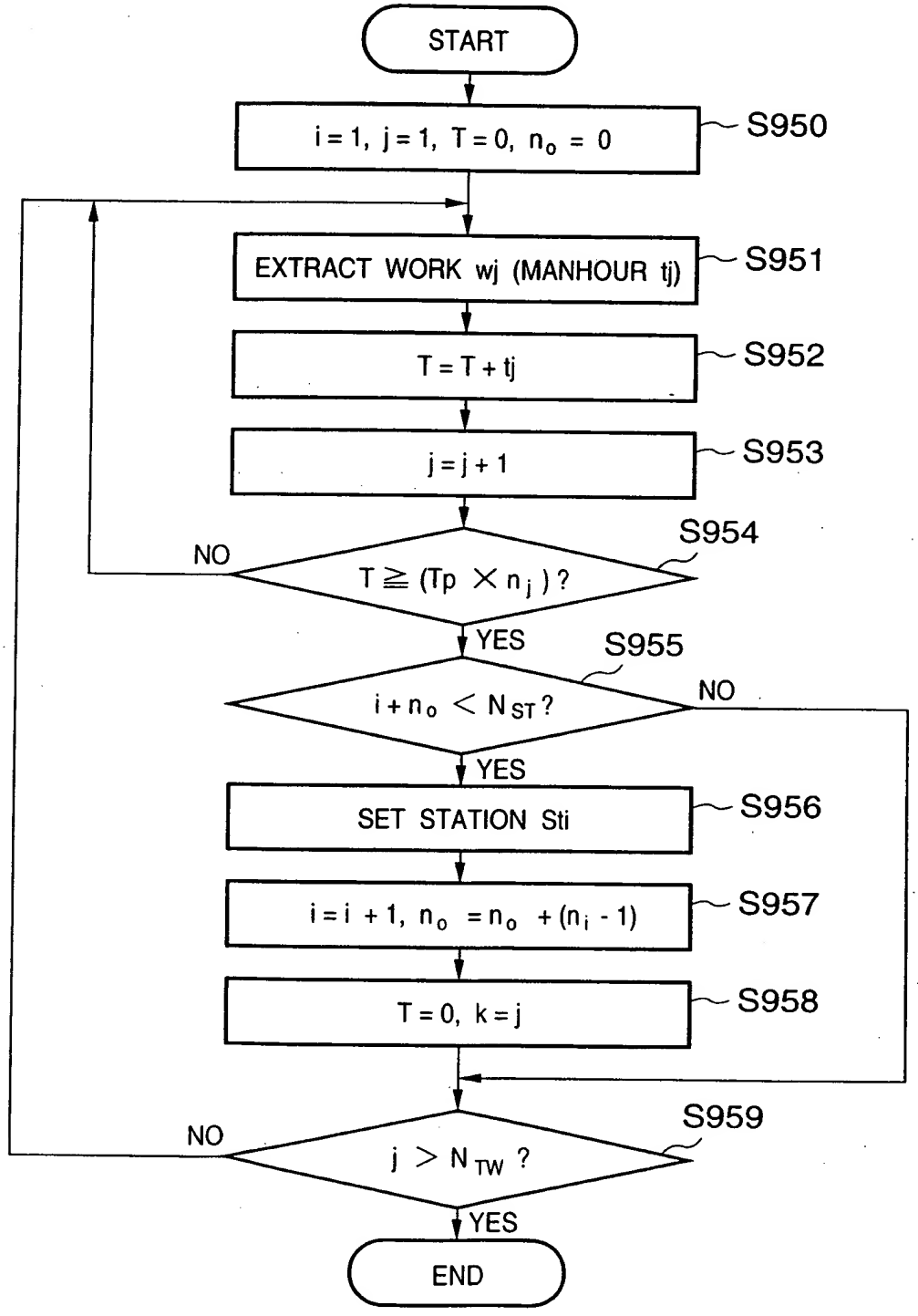
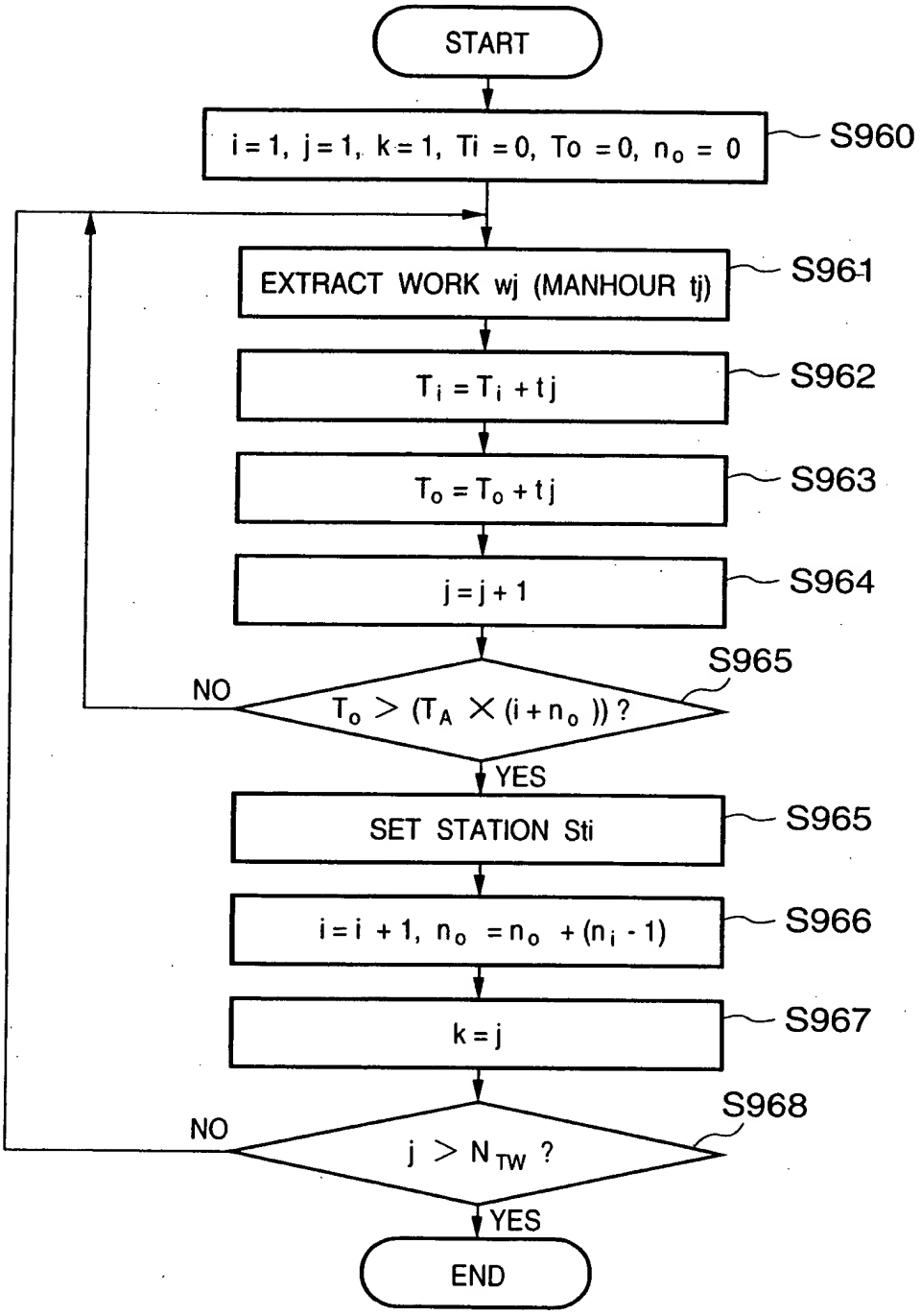

WORK GROUP DESIGNATION IMPOSSIBLE
GROUP 1 (DESIGNATION IS IMPOSSIBLE)
11
1
2
8
12
S
4
9
13
7
10
3
6
5

FIG. 95



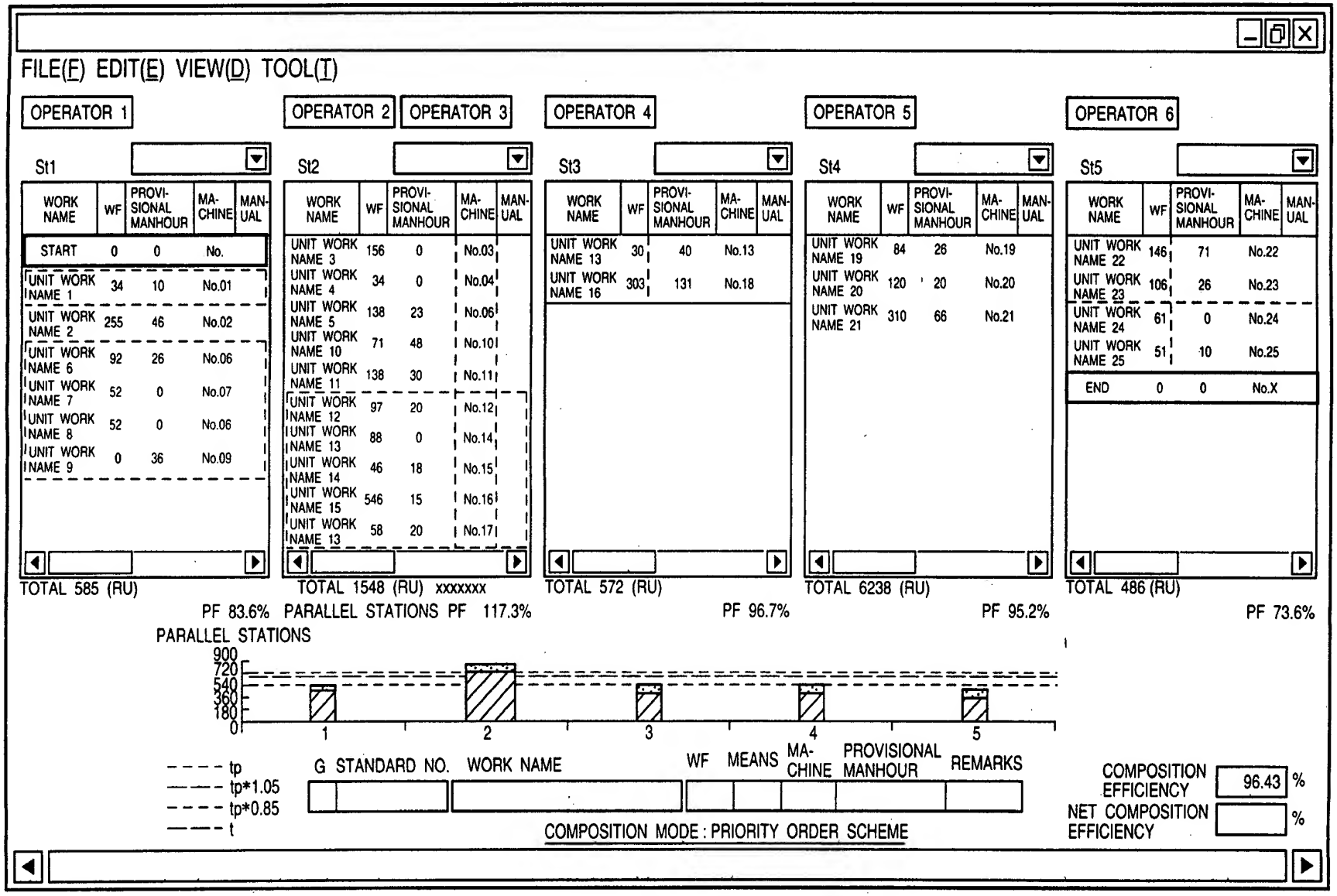
N_{ST} : THE NUMBER OF STATIONS
n_i : i STATION PARALLEL NUMBER
n_o : TOTAL ACCUMULATED PARALLEL SUM NUMBER

FIG. 96



N_{ST}: THE NUMBER OF STATIONS
T_i : i STATION MANHOUR
TA : STATION MANHOUR AVERAGE VALUE
$T_A = WF / N_{ST}$
To : TOTAL ACCUMULATED MANHOUR
n_i : i STATION PARALLEL NUMBER
n_o : TOTAL ACCUMULATED PARALLEL SUM NUMBER

FIG. 97


FILE(F) EDIT(E) VIEW(D) TOOL(T)
OPERATOR 1
OPERATOR 2
OPERATOR 3
OPERATOR 4
OPERATOR 5
OPERATOR 6
St1
St2
St3
St4
St5
WORK NAME
WF
PROVISIONAL MANHOUR
MACHINE
MANUAL
START 0 0 No.
UNIT WORK NAME 1 34 10 No.01
UNIT WORK NAME 2 255 46 No.02
UNIT WORK NAME 6 92 26 No.06
UNIT WORK NAME 7 52 0 No.07
UNIT WORK NAME 8 52 0 No.06
UNIT WORK NAME 9 0 36 No.09
UNIT WORK NAME 3 156 0 No.03
UNIT WORK NAME 4 34 0 No.04
UNIT WORK NAME 5 138 23 No.06
UNIT WORK NAME 10 71 48 No.10
UNIT WORK NAME 11 138 30 No.11
UNIT WORK NAME 12 97 20 No.12
UNIT WORK NAME 13 88 0 No.14
UNIT WORK NAME 14 46 18 No.15
UNIT WORK NAME 15 546 15 No.16
UNIT WORK NAME 13 58 20 No.17
UNIT WORK NAME 13 30 40 No.13
UNIT WORK NAME 16 303 131 No.18
UNIT WORK NAME 19 84 26 No.19
UNIT WORK NAME 20 120 20 No.20
UNIT WORK NAME 21 310 66 No.21
UNIT WORK NAME 22 146 71 No.22
UNIT WORK NAME 23 106 26 No.23
UNIT WORK NAME 24 61 0 No.24
UNIT WORK NAME 25 51 10 No.25
END 0 0 No.X
TOTAL 585 (RU)
TOTAL 1548 (RU) xxxxxxx
TOTAL 572 (RU)
TOTAL 6238 (RU)
TOTAL 486 (RU)
PF 83.6%
PARALLEL STATIONS PF 117.3%
PF 96.7%
PF 95.2%
PF 73.6%
PARALLEL STATIONS
900
720
540
360
180
0
1
2
3
4
5
tp
tp*1.05
tp*0.85
t
G STANDARD NO.
WORK NAME
WF
MEANS
MACHINE
PROVISIONAL MANHOUR
REMARKS
COMPOSITION EFFICIENCY
96.43
%
NET COMPOSITION EFFICIENCY
%
COMPOSITION MODE : PRIORITY ORDER SCHEME